

# SHARP

## SERVICE MANUAL / SERVICE-ANLEITUNG / MANUEL DE SERVICE

S65A4RT-203HS

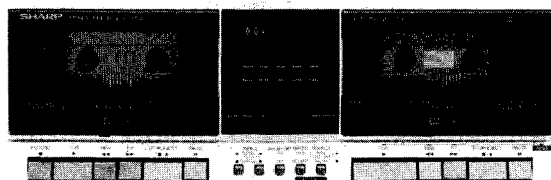
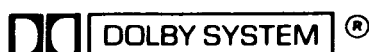


PHOTO: RT-203H(S)



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## RT-203H(S)(BK)(BR) RT-203E(BK)

### Note for users in UK

Recording and playback of any material may require consent which SHARP is unable to give. Please refer particularly to the provisions of Copyright Act 1956, the Dramatic and Musical Performers Protection Act 1958, the Performers Protection Acts 1963 and 1972 and to any subsequent statutory enactments and orders.

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.
- Im Interesse der Benutzer-Sicherheit sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.
- Dans l'intérêt de la sécurité de l'utilisateur, l'appareil devra être reconstitué dans sa condition première et seules des pièces identiques à celles spécifiées, doivent être utilisées.

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Ⓔ

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT,  
PLEASE REFER TO THE OPERATION MANUAL.

## SPECIFICATIONS

|                         |                                                            |                                      |                                                                           |
|-------------------------|------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------|
| Semiconductors:         | 7 ICs<br>29 Transistors<br>18 Diodes<br>10 LEDs            | S/N ratio:<br>(MAXELL UDXL II tape): | Dolby NR off; 56 dB<br>Dolby NR effect; 10 dB                             |
| Tape:                   | Compact cassette tape                                      | Input sensitivity and<br>impedance:  | Microphone; 0.2 mV<br>(6.8 k ohms)                                        |
| Tape speed:             | 4.75cm/sec. (1-7/8 ips.)                                   | Dimensions:                          | Width; 330 mm (13")<br>Height; 121 mm (4-3/4")<br>Depth; 266 mm (10-1/2") |
| Wow and flutter:        | 0.2% (DIN 45 500)<br>0.07% (WRMS)                          | Weight:                              | 3.2 kg (7.1 lbs.)                                                         |
| Frequency response:     |                                                            |                                      |                                                                           |
| Normal tape;            | 40 – 12,500 Hz (DIN 45 500)<br>(40 – 12,000Hz $\pm 3$ dB)  |                                      |                                                                           |
| MAXELL UDXL II<br>tape; | 40 – 14,000 Hz (DIN 45 500)<br>(40 – 13,000 Hz $\pm 3$ dB) |                                      |                                                                           |
| TDK Metal tape;         | 40 – 15,000 Hz (DIN 45 500)<br>(40 – 14,000 Hz $\pm 3$ dB) |                                      |                                                                           |

Specifications for this model are subject to change  
without prior notice.

## NAMES OF PARTS

- Deck 2: Cassette Compartment
- Deck 2: Tape Counter and Counter Reset Button
- Sharpscan Peak Level Display
- Record Level Control
- Deck 1: Cassette Compartment
- Deck 2: Record Button
- Deck 2: Play Button
- Deck 2: Rewind Button
- Deck 2: Fast Forward Button
- Deck 2: Stop/Eject Button
- Deck 2: Pause Button
- Deck 2: Tape Selector Switches
- Dolby NR Switch
- Dubbing Speed Switch
- Dubbing Source Selector Switch
- Deck 1: Play Button
- Deck 1: Rewind/Reverse APSS Button
- Deck 1: Fast Forward/Forward APSS Button
- Deck 1: Stop/Eject Button
- Deck 1: Pause Button
- Record Level Balance Control
- Input/Output Plug
- Input Selector Switch
- Centre Microphone Socket
- Beat Cancel Switch

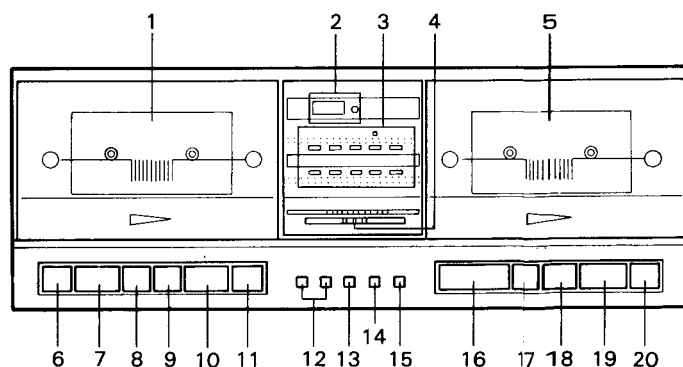


Figure 2-1

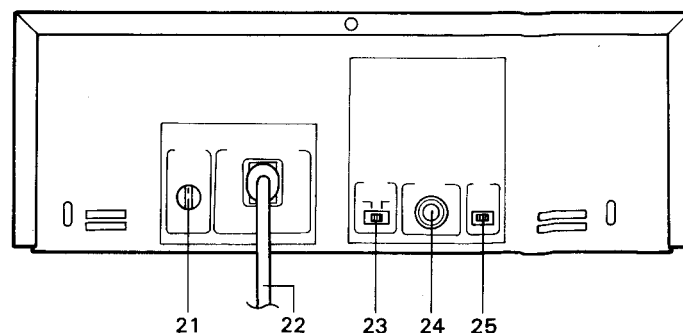


Figure 2-2

D

EINE VOLLSTÄNDIGE BESCHREIBUNG DER BEDIENUNG DIESES GERÄTES IST IN DER BEDIENUNGSANLEITUNG ENTHALTEN.

## TECHNISCHE DATEN

|                         |                             |                                                                                                        |                               |
|-------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------|
| Bestückung:             | 7 integrierte Schaltkreise  | Rauschabstand                                                                                          | Dolby-NR ausgeschaltet: 56 dB |
|                         | 29 Transistoren             | (MAXELL UDXL II -Band):                                                                                | Dolby-NR Effekt: 10 dB        |
|                         | 18 Dioden                   | Eingangsempfindlichkeit Mikrofon:                                                                      | 0,2 mV (6,8 kOhm)             |
|                         | 10 Leuchtdioden             | it und-impedanz:                                                                                       |                               |
| Band:                   | Kompaktcassettenband        | Abmessungen:                                                                                           | Breite: 330 mm                |
| Bandgeschwindigkeit:    | 4,75 cm/s                   |                                                                                                        | Höhe: 121 mm                  |
| Gleichlaufschwankungen: | 0,2% (DIN 45 500)           |                                                                                                        | Tiefe: 266 mm                 |
| Frequenzgang:           | 40 – 12 500 Hz (DIN 45 500) | Gewicht:                                                                                               | 3,2 kg                        |
| Normalband;             | (40 – 12 000 Hz $\pm$ 3 dB) | Die technischen Daten für dieses Modell können ohne vorherige Ankündigung Änderungen unterworfen sein. |                               |
| MAXELL UDXL II-Band;    | 40 – 14 000 Hz (DIN 45 500) |                                                                                                        |                               |
|                         | (40 – 13 000 Hz $\pm$ 3 dB) |                                                                                                        |                               |
| TDK-Reineisenband;      | 40 – 15 000 Hz (DIN 45 500) |                                                                                                        |                               |
|                         | (40 – 14 000 Hz $\pm$ 3 dB) |                                                                                                        |                               |

## BEZEICHNUNG DER TEILE

- Deck 2: Cassettenfach
- Deck 2: Bandzählwerk und Zählwerk-Rückstellknopf
- Sharpscan-Spitzenwertanzeige
- Aufnahmepegelsteller
- Deck 1: Cassettenfach
- Deck 2: Aufnahme Taste
- Deck 2: Wiedergabetaste
- Deck 2: Rückspultaste
- Deck 2: Schnellvorlauftaste
- Deck 2: Stopp-/Auswurf Taste
- Deck 2: Pausentaste
- Deck 2: Bandsortenwahlschalter
- Dolby-NR-Schalter
- Überspielgeschwindigkeitsschalter
- Überspiel-/Programmquellenwahlschalter
- Deck 1: Wiedergabetaste
- Deck 1: Taste für Rückspulung/APSS-Rücklauf
- Deck 1: Taste für Schnellvorlauf/APSS-Vorlauf
- Deck 1: Stopp-/Auswurf Taste
- Deck 1: Pausentaste
- Aufnahmepegel-Balancesteller
- Eingangs-/Ausgangsstecker
- Eingangswahlschalter
- Mittelmikrofonbuchse
- Schwebungsunterdrückungsschalter

F

POUR LA DESCRIPTION COMPLÈTE DU FONCTIONNEMENT DE CET APPAREIL, SE REPORTER AU MODE D'EMPLOI.

## CARACTÉRISTIQUES

|                        |                             |                                                                              |                        |
|------------------------|-----------------------------|------------------------------------------------------------------------------|------------------------|
| Semi-conducteurs:      | 7 IC                        | Rapport S/B (Bande                                                           | Dolby NR coupé: 56 dB  |
|                        | 29 transistors              | MAXELL UDXL II):                                                             | Effect Dolby NR: 10 dB |
|                        | 18 diodes                   | Sensibilité et impé-                                                         | Microphone: 0,2 mV     |
|                        | 10 LED                      | dance d'entrée:                                                              | (6,8 k ohms)           |
| Bande:                 | Bande cassette compacte     | Dimensions:                                                                  | Largeur: 330 mm        |
| Vitesse de défilement: | 4,75 cm/s                   |                                                                              | Hauteur: 121 mm        |
| Pleurage et            | 0,2% (DIN 45 500)           |                                                                              | Profondeur: 266 mm     |
| scintillement:         |                             | Poids:                                                                       | 3,2 kg                 |
| Réponse en fréquence:  |                             | Les caractéristiques de ce modèle sont sujettes à modification sans préavis. |                        |
| Bande normale:         | 40 à 12 500 Hz (DIN 45 500) |                                                                              |                        |
|                        | (40 à 12 000 Hz $\pm$ 3 dB) |                                                                              |                        |
| Bande MAXELL           | 40 à 14 000 Hz (DIN 45 500) |                                                                              |                        |
| UDXL II:               | (40 à 13 000 Hz $\pm$ 3 dB) |                                                                              |                        |
| Bande métallique       | 40 à 15 000 Hz (DIN 45 500) |                                                                              |                        |
| TDK:                   | (40 à 14 000 Hz $\pm$ 3 dB) |                                                                              |                        |

## NOMENCLATURE

- Platine 2: Compartiment de cassette
- Platine 2: Compteur de bande et bouton de remise à zéro du compteur
- Affichage de niveau de crête Sharpscan
- Commande de niveau d'enregistrement
- Platine 1: Compartiment de cassette
- Platine 2: Bouton d'enregistrement
- Platine 2: Bouton de lecture
- Platine 2: Bouton de rebobinage
- Platine 2: Bouton d'avance rapide
- Platine 2: Bouton d'arrêt/éjection
- Platine 2: Bouton de pause
- Platine 2: Commutateurs de sélection de bande
- Commutateur Dolby NR
- Commutateur de vitesse de copie
- Commutateur de sélection copie source
- Platine 1: Bouton de lecture
- Platine 1: Bouton de rebobinage/APSS d'inversion
- Platine 1: Bouton d'avance rapide/APSS d'avance
- Platine 1: Bouton d'arrêt/éjection
- Platine 1: Bouton de pause
- Commande de balance du niveau d'enregistrement
- Fich d'entrée/sortie
- Commutateur de sélection d'entrée
- Douille de microphone central
- Commutateur de suppression de battement

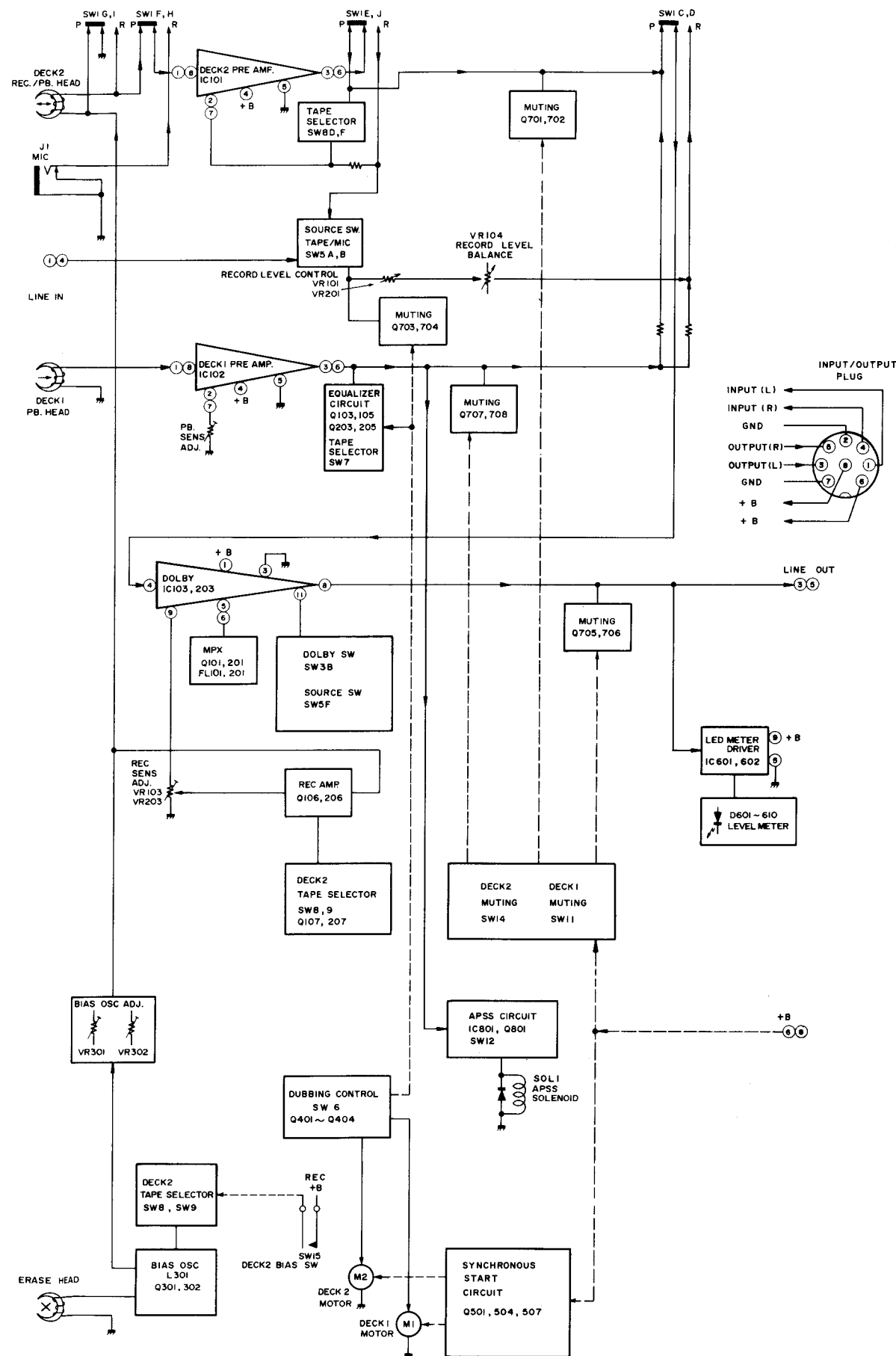


Figure 5 BLOCK DIAGRAM

E

## DISASSEMBLY

**Caution on Disassembly**

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep its safety and excellent performance:

1. Take cassette tape out of the cassette holder.
2. Be sure to remove the input/output plug from the receiver before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

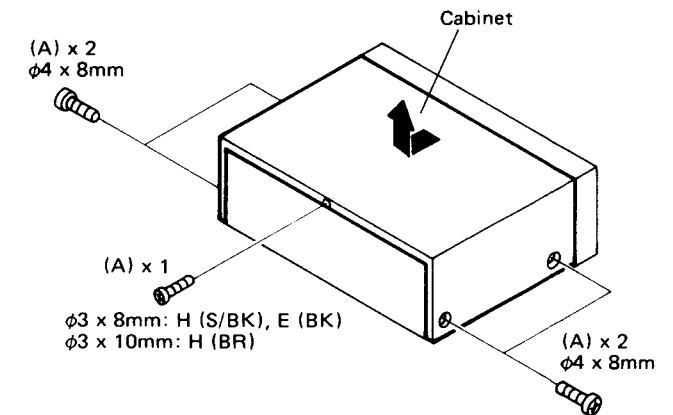


Figure 6-1

| STEP | REMOVAL                 | REMOVAL                                                                  | FIGURE     |
|------|-------------------------|--------------------------------------------------------------------------|------------|
| 1    | Cabinet                 | 1. Screw..... (A) x 5                                                    | 6-1        |
| 2    | Chassis                 | 1. Knob..... (B) x 1<br>2. Socket..... (C) x 1<br>3. Screw..... (D) x 10 | 6-2<br>6-3 |
| 3    | Cassette Deck mechanism | 1. Tape counter drive belt..... (E) x 1<br>2. Screw..... (F) x 4         | 6-4        |

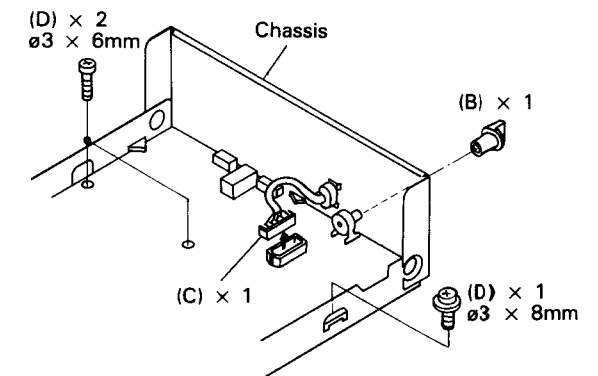


Figure 6-2

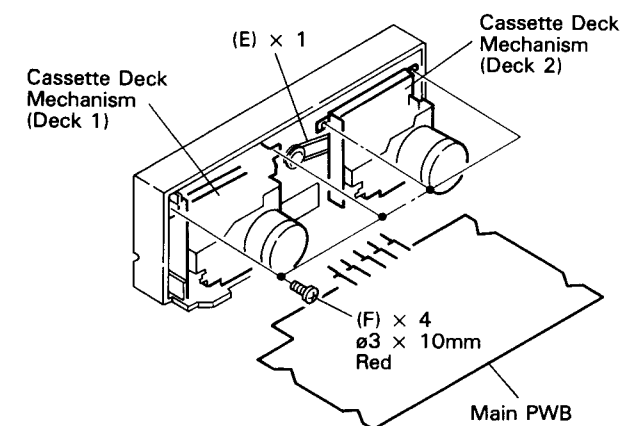


Figure 6-4

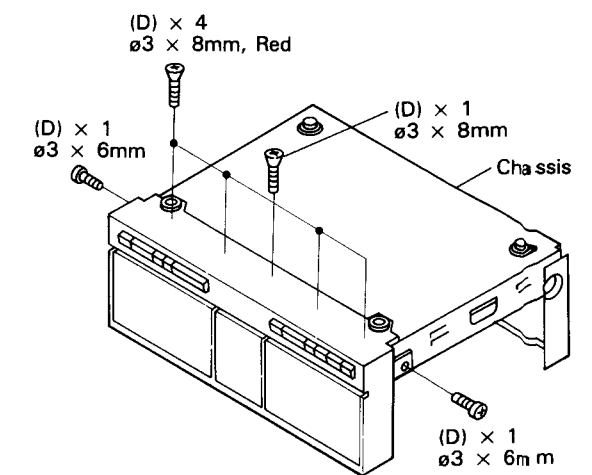


Figure 6-3

D

**ZERLEGEN****Vorsichtsmassregeln für das Zerlegen**

Beim Zerlegen und Zusammenbauen des Gerätes die folgenden Anweisungen befolgen, um dessen Betriebssicherheit und ausgezeichnete Leistung aufrechtzuerhalten.

1. Cassette aus dem cassettenhalter entfernen.
2. Vor dem Zerlegen des Gerätes unbedingt den Eingangs-/Ausgangsstecker an den Receiver ziehen.
3. Nylonbänder oder Leitungshalter entfernen, falls dies beim Zerlegen des Gerätes erforderlich ist. Nach Warten des Gerätes darauf achten, die Leitungen wieder so zu verlegen, wie sie vor dem Zerlegen angeordnet waren.
4. Beim Ausführen von Wartungsarbeiten auf statische Elektrizität der integrierten Schaltkreise und anderen Schaltungen achten.

| SCH-RITT | ENTFERNEN              | VERFAHREN                                                                     | AB-BILDUNG |
|----------|------------------------|-------------------------------------------------------------------------------|------------|
| 1        | Gehäuse                | 1. Schraube..... (A) × 5                                                      | 6-1        |
| 2        | Chassis                | 1. Knopf ..... (B) × 1<br>2. Buchse..... (C) × 1<br>3. Schraube..... (D) × 10 | 6-2<br>6-3 |
| 3        | Cassettendeck-laufwerk | 1. Bandzählwerk-Antriebs-riemen..... (E) × 1<br>2. Schraube ..... (F) × 4     | 6-4        |

F

**DÉMONTAGE****Précautions pour le démontage**

Lors du démontage de l'appareil et de son remontage, suivre les précautions ci-dessous, pour maintenir la sécurité et d'excellentes performances.

1. Déposer la bande cassette du porte-cassette
2. Ne pas oublier de retirer la fiche d'entrée/sortie sur l'ampli-tuner
3. Déposer les bandes de nylon ou les serre-câbles si nécessaire lors du démontage de l'appareil. Après la réparation de l'appareil, s'assurer de redispser les fils tel qu'ils étaient avant le démontage.
4. Faire attention à l'électricité statique des circuits intégrés et des autres circuits lors de la réparation.

| ÉTAPE | DÉPOSE                   | PROCÉDÉ                                                                         | FIGURE     |
|-------|--------------------------|---------------------------------------------------------------------------------|------------|
| 1     | Coffret                  | 1. Vis ..... (A) × 5                                                            | 6-1        |
| 2     | Châssis                  | 1. Bouton ..... (B) × 1<br>2. Douille ..... (C) × 1<br>3. Vis ..... (D) × 10    | 6-2<br>6-3 |
| 3     | Mécanism du magnétophone | 1. Courroie d'entraînement du compteur de bande (E) × 1<br>2. Vis ..... (F) × 4 | 6-4        |

## CIRCUIT DESCRIPTION

**SYNCHRONOUS START CIRCUIT**

When the unit is in the dubbing mode in which the recorded contents of Deck 1 are copied into Deck 2, the synchronous start circuit works to enable both Deck 1 and Deck 2 to start their operations simultaneously.

**Circuitry Behaviors**

When the record button of Deck 2 is pushed while the dubbing source selector switch SW5 is set at TAPE 1/MIC-MIX position, the power is applied via the record/playback switch SW1-B to Q507 to turn it on; the turn-on time of Q507 is decided by the time constant of C507. With Q507 turned on, Q501 turns off so that the motor M2 of Deck 2 stops to get Deck 2 in the record standby mode.

When the play button of Deck 1 is then pushed, the muting switch SW11 turns on and the base of Q507 is grounded. With Q507 turned off, Q501 turns on so that the motor M2 of Deck 2 is allowed to rotate to put Deck 2 in the record mode. In this way, Deck 2 gets in the record mode simultaneously when Deck 1 is put in the playback mode by pushing its play button.

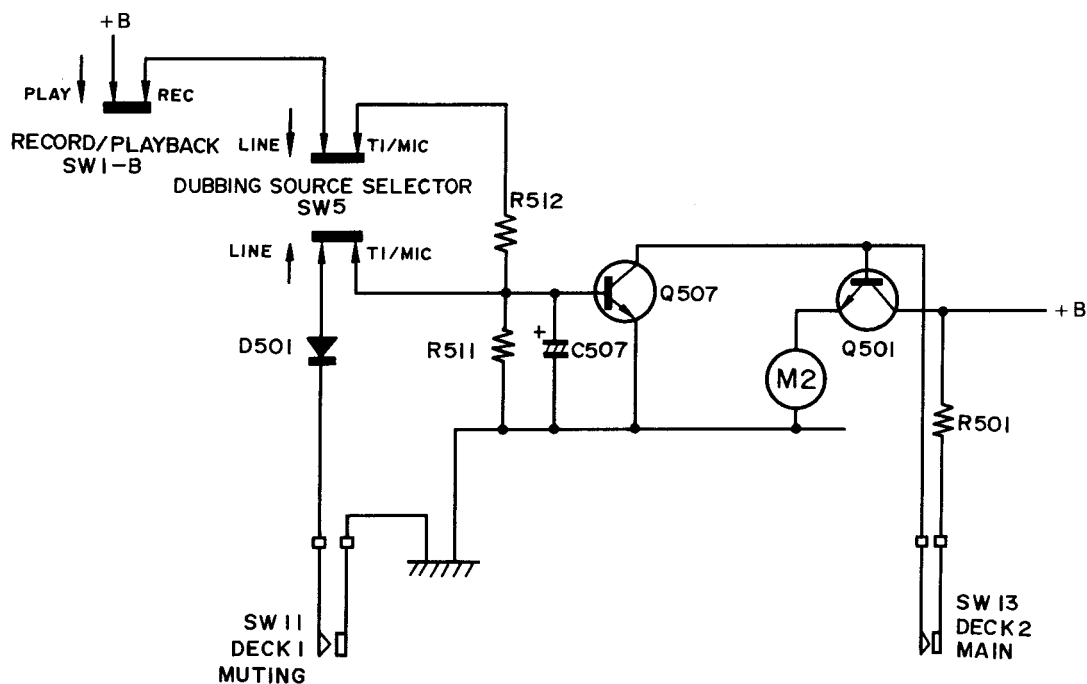


Figure 8—1

## ④ KREISBESCHREIBUNGEN

### SYNCHRONSTARTSCHALTUNG

Wenn sich das Gerät in der Überspiel-Betriebsart befindet, wobei die aufgenommenen Stücke von Deck 1 auf Deck 2 überspielt werden, ermöglicht die synchronstartschaltung das gleichzeitige Anlaufen von Deck 1 und Deck 2.

#### Schaltkreisverhalten

Wenn die Aufnahmetaste des Decks 2 betätigt wird, während der Überspiel-Programmuellenschalter SW5 auf "TAPE 1/MIC-MIX" steht, wird Spannung über den Aufnahme-/Wiedergabeschalter SW1-B geleitet und dabei Q507 eingeschaltet. Die Einschaltzeit des Q507 wird dabei von der Zeitkonstante des C507 bestimmt. Wenn sich der Q507 einschaltet, wird der Q501 unterbrochen und der Motor M2 von Deck 2 h"alt an. Das Deck 2 befindet sich nun in der Aufnahme-Bereitschafts-Betriebsart. Wenn die Wiedergabetaste von Deck 1 betätigt wird, schaltet sich der Muting-schalter SW11 ein und die Basis von Q507 wird massengeschlossen. Durch die Unterbrechung von Q507, schaltet sich Q501 ein, so da" der Motor M2 des Decks 2 wieder anl"uft und das Deck 2 in die Aufnahme-Betriebsart zur"ckbringt. Das Deck 2 get daher simultan in die Aufnahme-Betriebsart "ber, wenn das Deck 1 durch Dr"cken der Wiedergabetaste in die Wiedergabe-Betriebsart gebracht wird.

## ⑤ DESCRIPTION DU CIRCUIT

### CIRCUIT DE D"EMARRAGE SYNCHRONE

C'est un circuit qui permet de mettre simultan"ment les Platines 1 et 2 en route pour la copie (enregistrement de la Platine 1 " la Platine 2).

#### Fonctionnement

Quand on appuie sur le bouton d'enregistrement de la Platine 2 en pla"ant le commutateur de s"lection de source de copie SW5 " la position "TAPE 1/MIC-MIX", le courant passant par le commutateur d'enregistrement/lecture SW1-B met le Q507 en marche; celui-ci reste dans cet "tat pendant une dur"e d"termin"e par la constante de temps du C507. En m"me temps que cette mise en marche, le Q501 se met hors circuit en arr"tant le moteur M2 de la Platine 2. Celle-ci passe ensuite au mode d'attente pour l'enregistrement.

Si on appuie alors sur le bouton de lecture de la Platine 1, le commutateur d'assourdissement SW11 est mis en circuit et la base du Q507 est reli"e " la masse. Avec la mise hors circuit du Q507, le Q501 se met en marche et fait partir le moteur M2 de la Platine 2. Celle-ci passe alors au mode d'enregistrement.

Ainsi commence la copie synchrone par la pression du bouton de lecture de la Platine 1.

## MECHANICAL ADJUSTMENT

Connect the input/output plug to the receiver, or apply +12.8V by an external DC power supply.

| ITEM          | USING JIG                                                              | ADJUSTMENT POINTS                                                                              | REMARKS (CHECK)                                                            |
|---------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Driving power | Tape tension measuring cassette TW-2412                                | —                                                                                              | More than 180g                                                             |
| Torque        | Torque meter<br>Play TW-2111<br>Fast-forward TW-2231<br>Rewind TW-2231 | —                                                                                              | (Play : 35-60g-cm)<br>(Fast-forward : 70-110g-cm)<br>(Rewind : 70-110g-cm) |
| Azimuth       | Test tape MTT-114                                                      | Azimuth adjusting screw                                                                        | Sine waveform attains the maximum.                                         |
| Tape speed    | Test tape<br>Normal speed MTT-111<br>High speed MTT-111                | Normal speed<br>Deck 1: VR402<br>Deck 2: VR404<br>High speed<br>Deck 1: VR401<br>Deck 2: VR403 | Normal speed<br>$2990 \pm 20$ Hz<br>High speed<br>$5276 \pm 50$ Hz         |

\* To get the unit in playback mode at high speed, short the collector and emitter of Q403.

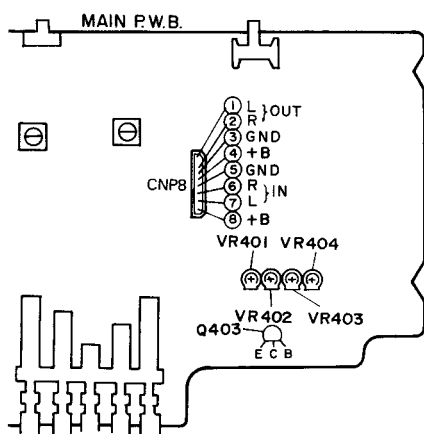


Figure 10-4 ADJUSTMENT POINTS

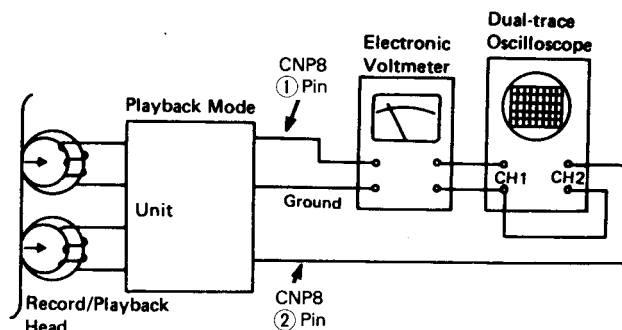


Figure 10-1 AZIMUTH

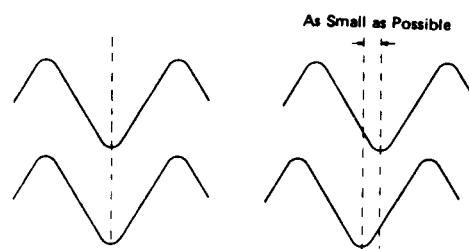


Figure 10-2 AZIMUTH WAVEFORM

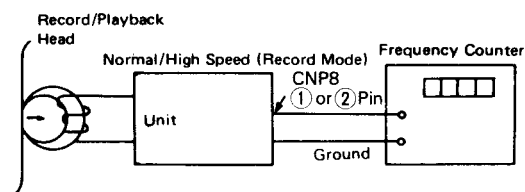


Figure 10-3 TAPE SPEED

## TEST TAPES FOR MEASUREMENT

| COMPACT CASSETTE TYPE   |                                |                                                    |                                   |
|-------------------------|--------------------------------|----------------------------------------------------|-----------------------------------|
| TITLE                   | MODEL                          | FREQUENCY/LEVEL                                    | APPLICATION                       |
| FLUTTER                 | MTT-111                        | 3 kHz, -10 dB                                      | Tape speed, Wow and flutter check |
| AZIMUTH                 | MTT-113<br>MTT-113C<br>MTT-114 | 6.3 kHz, -10 dB<br>8 kHz, -10 dB<br>10 kHz, -10 dB | Head azimuth adjustment           |
| DISTORTION              | MTT-118                        | 1 kHz, -10 dB                                      | Distortion check level adjustment |
| DOLBY LEVEL CALIBRATION | MTT-150                        | Dolby B-Type<br>Tone 200 nwb/m                     | Dolby NR B-type level adjustment  |
| BLANK                   | MTT-502                        | —                                                  | Record frequency check            |

| TORQUE METER FOR COMPACT CASSETTE |                   |                             |
|-----------------------------------|-------------------|-----------------------------|
| MODEL                             | MEASUREMENT RANGE | APPLICATION                 |
| TW-2111                           | 10 - 100 g-cm     | Normal : Playback torque    |
|                                   | 1.5 - 10 g-cm     | Normal : Back-tension       |
| TW-2121                           | 10 - 100 g-cm     | Reverse : Playback torque   |
|                                   | 1.5 - 10 g-cm     | Reverse : Back tension      |
| TW-2231                           | 30 - 200 g-cm     | Fast-forward, Rewind torque |
| TW-2412                           | 0 - 300 g         | Normal : Driving power      |
| TW-2422                           | 0 - 300 g         | Reverse : Driving power     |

## Ⓓ MECHANISCHE EINSTELLUNG

Den Eingangs-/Ausgangsstecker an den Receiver anschließen oder durch eine Außengleichspannung +12,8V zuleiten.

| BE-NENNUNG          | FÜHRUNG-SLEHRE                                                                       | EINSTELL-PUNKT                                                                                               | BEMERKUNGEN (PRÜFUNG)                                                                         |
|---------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Antriebskraft       | Bandzug-Meßcassette TW-2412                                                          | —                                                                                                            | Mehr als 180 g                                                                                |
| Drehmoment          | Drehmomentmesser Weidergabe TW-2111<br>Schnellvorlauf TW-2231<br>Rückspulung TW-2231 | —                                                                                                            | (Wiedergabe: 35 – 60 g-cm)<br>(Schnellvorlauf: 70 – 110 g-cm)<br>(Rückspulung: 70 – 110 g-cm) |
| Azimut              | Testband MTT-114                                                                     | Azimateinstellschraube                                                                                       | Sinuswellenform wird maximal.                                                                 |
| Bandgeschwindigkeit | Testband MTT-111                                                                     | Normal Geschwindigkeit Deck 1: VR402<br>Deck 2: VR404<br>Hohe Geschwindigkeit Deck 1: VR401<br>Deck 2: VR403 | Normal Geschwindigkeit $2\,990 \pm 20$ Hz<br>Hohe Geschwindigkeit $5\,276 \pm 50$ Hz          |

\* Um das Gerät auf die Wiedergabe-Betriebsart bei hoher Geschwindigkeit einzustellen, den Kollektor und Emitter von Q403 kurzschließen.

## TESTBÄNDER FÜR MESSUNG

| KOMPAKTCASSETTENTYP     |                                |                                                    |                                                                |
|-------------------------|--------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| BENENNUNG               | MODELL                         | FREQUENZ/PEGEL                                     | ANWENDUNG                                                      |
| GLEICHLAUF-SCHWANKUNGEN | MTT-111                        | 3 kHz, -10 dB                                      | Überprüfung der Bandgeschwindigkeit und Gleichlaufschwankungen |
| AZIMUT                  | MTT-113<br>MTT-113C<br>MTT-114 | 6,3 kHz, -10 dB<br>8 kHz, -10 dB<br>10 kHz, -10 dB | Kopfazimateinstellung                                          |
| KLIRRFAKTOR             | MTT-118                        | 1 kHz, -10 dB                                      | Verzerrungspegel-einstellung                                   |
| DOLBY-PEGEL-EICHUNG     | MTT-150                        | Ton von Dolby B-Typ 200 nwb/m                      | Dolby-NR B-Typ-Pegel-einstellung                               |
| LEER-CASSETTE           | MTT-502                        | —                                                  | Überprüfung der Aufnahme-frequenz                              |

| DREHMOMENTMESSER FÜR KOMPAKTCASSETTE |               |                                      |
|--------------------------------------|---------------|--------------------------------------|
| MODELL                               | MESSBEREICH   | ANWENDUNG                            |
| TW-2111                              | 10 – 100 g-cm | Normal : Wiedergabedrehmoment        |
|                                      | 1,5 – 10 g-cm | Normal : Rückzug                     |
| TW-2121                              | 10 – 100 g-cm | Rücklauf : Wiedergabedrehmoment      |
|                                      | 1,5 – 10 g-cm | Rücklauf : Rückzug                   |
| TW-2231                              | 30 – 200 g-cm | Schnellvorlauf-, Rückspul-drehmoment |
| TW-2412                              | 0 – 300 g     | Normal : Antriebskraft               |
| TW-2422                              | 0 – 300 g     | Rücklauf : Antriebskraft             |

## Ⓕ RÉGLAGE DE MÉCANISME

Brancher la fiche d'entrée/sortie sur l'ampli-tuner, ou alimenter le courant de +12,8V CC.

| ARTICLE                  | GABARIT                                                                              | POINTS DE RÉGLAGE                                                                                           | REMARQUES (VÉRIFICATION)                                                                |
|--------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Puissance d'entraînement | Cassette de mesure de tension de la bande TW-2412                                    | —                                                                                                           | Plus de 180 g                                                                           |
| Couple                   | Compteur de couple Lecture: TW-2111<br>Avance rapide: TW-2231<br>Rebobinage: TW-2231 | —                                                                                                           | (Lecture: 35 à 60g-cm)<br>(Avance rapide: 70 – 110 g-cm)<br>(Rebobinage: 70 – 110 g-cm) |
| Azimuth                  | Bande d'essai MTT-114                                                                | Vis de réglage de l'azimuth                                                                                 | La forme d'onde sinusoïdale atteint le maximum.                                         |
| Vitesse de la bande      | Bande d'essai MTT-111                                                                | Vitesse normale Platine 1: VR402<br>Platine 2: VR404<br>Grande vitesse Platine 1: VR401<br>Platine 2: VR403 | Vitesse normale $2\,990 \pm 20$ Hz<br>Grande vitesse $5\,276 \pm 50$ Hz                 |

\* Pour mettre l'appareil en mode de lecture à grande vitesse, court-circuiter le collecteur et l'émetteur du Q403.

## BANDES D'ESSAI POUR MESURAGE

| TYPE CASSETTE COMPACTE    |                                |                                                    |                                                                     |
|---------------------------|--------------------------------|----------------------------------------------------|---------------------------------------------------------------------|
| TITRE                     | MODÈLE                         | FRÉQUENCE/NIVEAU                                   | APPLICATION                                                         |
| PLEURAGE                  | MTT-111                        | 3 kHz, -10 dB                                      | Vérification de la vitesse de bande et du pleurage et scintillement |
| AZIMUTH                   | MTT-113<br>MTT-113C<br>MTT-114 | 6,3 kHz, -10 dB<br>8 kHz, -10 dB<br>10 kHz, -10 dB | Réglage de l'azimuth de la tête                                     |
| DISTORSION                | MTT-118                        | 1 kHz, -10 dB                                      | Réglage de niveau de distorsion                                     |
| CALIBRAGE DU NIVEAU DOLBY | MTT-150                        | Tonalité Dolby type B, 200 nwb/m                   | Réglage du niveau type B Dolby NR                                   |
| ESPACE VIERGE             | MTT-502                        | —                                                  | Vérification de la fréquence d'enregistrement                       |

| JAUGE DE COUPLE POUR CASSETTE COMPACTE |                 |                                         |
|----------------------------------------|-----------------|-----------------------------------------|
| MODÈLE                                 | GAMME DE MESURE | APPLICATION                             |
| TW-2111                                | 10 – 100 g-cm   | Normal : Lecture d'enroulement          |
|                                        | 1,5 – 10 g-cm   | Normal : Tension arrière                |
| TW-2121                                | 10 – 100 g-cm   | Retour : Lecture d'enroulement          |
|                                        | 1,5 – 10 g-cm   | Retour : Tension arrière                |
| TW-2231                                | 30 – 200 g-cm   | Couple d'avance rapide et de rebobinage |
| TW-2412                                | 0 – 300 g       | Normal : Puissance d'entraînement       |
| TW-2422                                | 0 – 300 g       | Retour : Puissance d'entraînement       |

E

## CIRCUIT ADJUSTMENT

Connect the input/output plug to the receiver, or apply +12.8V by an external DC power supply.

| SETTING POSITION OF SWITCH AND KNOB | Dolby NR Switch: off<br>Deck 1 Tape Selector Switch: Normal<br>Deck 2 Tape Selector Switch: Normal<br>Input Selector Switch: Line Beat Cancel Switch: A |                      |                                                                                                                                                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM                                | INPUT                                                                                                                                                   | ADJUSTMENT POINT     | REMARKS (CHECK)                                                                                                                                                                                           |
| BIAS OSCILLATOR FREQUENCY           | —                                                                                                                                                       | L301                 | 105 ± 5 kHz                                                                                                                                                                                               |
| BIAS CURRENT                        | —                                                                                                                                                       | L: VR301<br>R: VR302 | Normal: 45mV                                                                                                                                                                                              |
| ERASE CURRENT                       | —                                                                                                                                                       | —                    | (Metal: 36 ± 4V)                                                                                                                                                                                          |
| DECK 1 PLAYBACK SENSITIVITY         | Test tape MTT-150                                                                                                                                       | L: VR102<br>R: VR202 | Normal: 550mV                                                                                                                                                                                             |
| DECK 2 PLAYBACK SENSITIVITY         | Test tape MTT-150                                                                                                                                       | —                    | See that the electronic voltmeter reading is within the range from 490mV to 620mV. If not, take the procedures shown in the Table *1.                                                                     |
| DECK 2 RECORD/PLAYBACK SENSITIVITY  | Non-recorded tape (MTT-502) 400 Hz -13 dB (1V = 0 dB)                                                                                                   | L: VR103<br>R: VR203 | 1. Adjust the record level knobs so that the electronic voltmeter reads 360mV.<br>2. Playback the normal tape recorded and adjust the semi-variable resistor so that the electronic voltmeter read 360mV. |

Table \* 1

| Voltmeter reads | Procedures                  |
|-----------------|-----------------------------|
| More than 620mV | Cut the resistor R113, R213 |
| Less than 490mV | Cut the resistor R111, R211 |

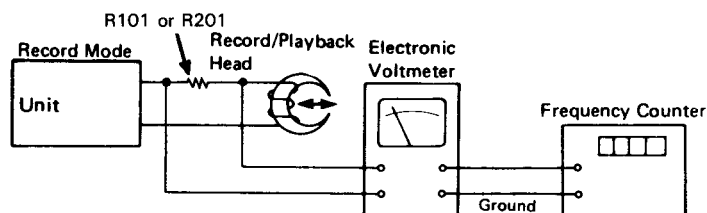


Figure 12-1 BIAS OSCILLATOR FREQUENCY/BIAS CURRENT

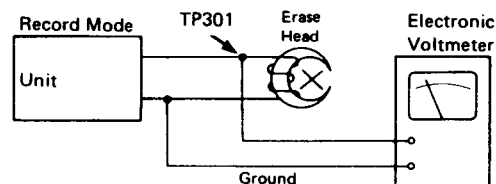


Figure 12-2 ERASE CURRENT

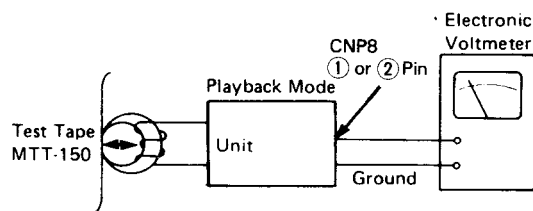


Figure 12-3 DECK 1/DECK 2 PLAYBACK SENSITIVITY

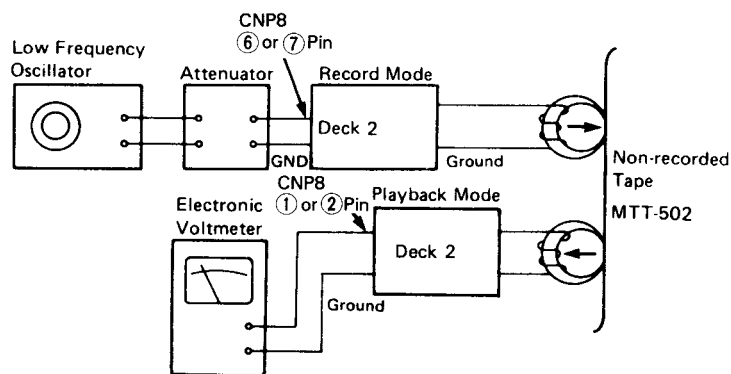


Figure 12-4 DECK 2 RECORD/PLAYBACK SENSITIVITY

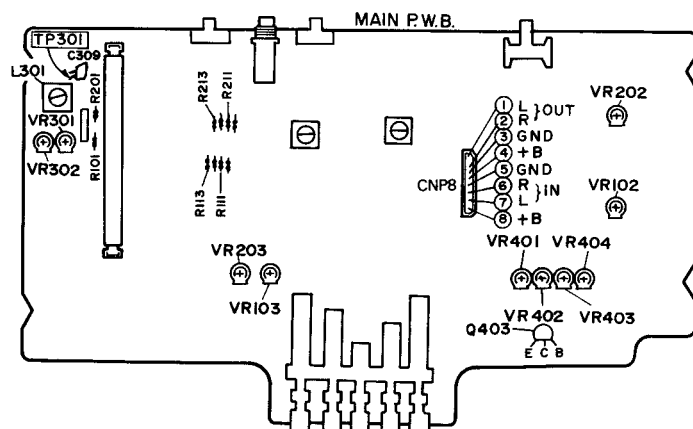


Figure 12-5 ADJUSTMENT POINTS

## ④ SCHALTUNGSEINSTELLUNG

Den Eingangs-/Ausgangsstecker an den Receiver anschließen oder durch eine Außengleichspannung +12,8V zuleiten.

| SCHALTER-UND<br>STELLER-<br>EINSTELL-<br>POSITION               | Dolby-NR-Schalter: Aus<br>Deck 1 Wahlschalter: Normal<br>Deck 2 Wahlschalter: Normal<br>Eingangswahlschalter: Line<br>Schwebungsunterdrückungsschalter: A |                      |                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BENENNUNG                                                       | EINGANG                                                                                                                                                   | EINSTELL-<br>PUNKT   | BEMERKUNGEN<br>(PRÜFUNG)                                                                                                                                                                                                                                                 |
| VORMAGNETI-<br>SIERUNGS-<br>SCHWING<br>FREQUENZ                 | —                                                                                                                                                         | L301                 | 105 ± 5 kHz                                                                                                                                                                                                                                                              |
| VORMAGNETI-<br>SIERUNGS-<br>STROM                               | —                                                                                                                                                         | L: VR301<br>R: VR302 | Normalband: 45mV                                                                                                                                                                                                                                                         |
| LÖSCHSTROM                                                      | —                                                                                                                                                         | —                    | (Reineisenband:<br>36 ± 4V)                                                                                                                                                                                                                                              |
| WIEDERGABE-<br>EMPFINDLICH-<br>KEIT VON<br>DECK 1               | Testband<br>MTT-150                                                                                                                                       | L: VR102<br>R: VR202 | Normalband:<br>550mV                                                                                                                                                                                                                                                     |
| WIEDERGABE-<br>EMPFINDLICH-<br>KEIT VON<br>DECK 2               | Testband<br>MTT-150                                                                                                                                       | —                    | Überprüfen, ob<br>der elektronische<br>Spannungsmesser<br>490mV bis<br>620mV anzeigt.<br>Wenn es nicht so<br>ist, die Nach-<br>stellung gemäß<br>Tabelle *1<br>vornehmen.                                                                                                |
| AUFNAHME-/<br>WIEDERGABE-<br>EMPFINDLICH-<br>KEIT VON<br>DECK 2 | Unbespiel-<br>tes Band<br>(MTT-502)<br>400Hz<br>-13 dB<br>(1V=0 dB)                                                                                       | L: VR103<br>R: VR203 | 1. Den Aufnahme-<br>pegelsteller so<br>einstellen, daß<br>der elektronische<br>Spannungsmesser<br>360mV anzeigt.<br>2. Das bespielte<br>Normalband wie-<br>dergeben und den<br>Trimmer so ein-<br>stellen, daß der<br>elektronische<br>Spannungsmesser<br>360mV anzeigt. |

Tabelle \*1

| Anzeige des<br>Spannungsmessers | Verfahren                              |
|---------------------------------|----------------------------------------|
| Mehr als 620mV                  | Den Widerstand R113 oder R213 trennen. |
| Weniger als 490mV               | Den Widerstand R111 oder R211 trennen. |

## ⑤ RÉGLAGE DU CIRCUIT

Brancher la fiche d'entrée/sortie sur l'ampli-tuner, ou alimenter le courant de +12,8V CC.

| RÉGLAGE DE<br>LA POSITION<br>DES COMMUTA-<br>TEURS ET DES<br>BOUTONS | Commutateur Dolby NR: Coupé<br>Platine 1: Commutateur de sélection: Normale<br>Platine 2: Commutateur de sélection: Normale<br>Commutateur de sélection d'entrée: Line<br>Commutateur de suppression de battement: A |                      |                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARTICLE                                                              | ENTRÉE                                                                                                                                                                                                               | POINT DE<br>RÉGLAGE  | REMARQUES<br>(VÉRIFICATION)                                                                                                                                                                                                                                                                               |
| FREQUENCE<br>DE L'OSCILLA-<br>TION DE<br>POLARISATION                | —                                                                                                                                                                                                                    | L301                 | 105 ± 5 kHz                                                                                                                                                                                                                                                                                               |
| COURANT DE<br>POLARISATION                                           | —                                                                                                                                                                                                                    | G: VR301<br>D: VR302 | Normal: 45mV                                                                                                                                                                                                                                                                                              |
| COURANT<br>D'EFFACEMENT                                              | —                                                                                                                                                                                                                    | —                    | (Metal: 36 ± 4V)                                                                                                                                                                                                                                                                                          |
| SENSIBILITÉ<br>DE LECTURE<br>DE LA<br>PLATINE 1                      | Bande d'essai<br>MTT-150                                                                                                                                                                                             | G: VR102<br>D: VR202 | Normal: 550mV                                                                                                                                                                                                                                                                                             |
| SENSIBILITÉ<br>DE LECTURE<br>DE LA<br>PLATINE 2                      | Bande d'essai<br>MTT-150                                                                                                                                                                                             | —                    | Voir si l'indica-<br>tion du volt-<br>mètre électro-<br>nique se situe<br>entre 490mV<br>et 620mV.<br>Sinon, effectuer<br>les procédés<br>indiqués dans<br>le Tableau *1.                                                                                                                                 |
| SENSIBILITÉ<br>D'ENREGISTRE-<br>MENT/LECTURE                         | Bande non<br>enregistrée<br>(MTT-502)<br>400 Hz<br>-13 dB<br>(1V=0 dB)                                                                                                                                               | G: VR103<br>D: VR203 | 1. Régler la bouton<br>de commande de<br>niveau du disque<br>de telle sorte<br>que le voltmètre<br>électronique<br>indique 360mV.<br>2. Lire une bande<br>normale enre-<br>gistrée et régler<br>la résistance<br>semi-variable de<br>telle sorte que<br>le voltmètre<br>électronique<br>indique<br>360mV. |

Tableau \*1

| Indication du voltmètre | Procédés                          |
|-------------------------|-----------------------------------|
| Supérieure à 620mV      | Couper la résistance R113 ou R213 |
| Inférieure à 490mV      | Couper la résistance R111 ou R211 |

## ⑥ NOTES ON SCHEMATIC DIAGRAM

- Resistor:  
To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm, the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor.
- Capacitor:  
To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.  
(CH), (RH), (TH), (UJ): Temperature compensation
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.

- Parts marked with "△" ( ) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.
- To indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.  
Making, except for ( ): Stop mode  
( ): Play mode at normal speed  
[ ]: Record mode at normal speed  
< >: Record mode at high speed

## ⑦ ANMERKUNGEN ZUM SCHEMATISCHEN SCHALTPLAN

- Widerstände:  
Um die Einheiten der Widerstände unterscheiden zu können, werden Symbole wie K und M benutzt. Das Symbol K bedeutet 1000 Ohm und das Symbol M 1000 Kiloohm. Bei Widerständen ohne Symbol handelt es sich um ohmsche Widerstände.
- Kondensatoren:  
Zum Bezeichnen der Kondensatoreinheit wird das Symbol P benutzt; dieses Symbol P bedeutet Nanofarad. Die Einheit eines Kondensators ohne Symbol ist Mikrofarad. Für Elektrolytkondensatoren wird die Bezeichnung "Kapazität/Stehspannung" benutzt.  
(CH), (RH), (TH), (UJ): Wärmeausgleich
- Änderungen des schematischen Schaltplans und der Verdrahtungsseite der Leiterplatte für dieses Modell im Sinne von Verbesserungen jederzeit vorbehalten.

- Die mit △ ( ) bezeichneten Teile sind besonders wichtig für die Aufrechterhaltung der Sicherheit. Beim Wechseln dieser Teile sollten die vorgeschriebenen Teile immer verwendet werden, um sowohl die Sicherheit als auch die Leistung des Gerätes aufrechtzuerhalten.
- Die in den einzelnen Teilen angegebenen Spannungen werden mit einem Digitalvielfachmeßgerät zwischen dem betreffenden Teil und dem Chassis ohne Signaleitung gemessen.  
Kennzeichnung außer ( ): Stopp- Betriebsart  
( ): Wiedergabe-Betriebsart bei normaler Geschwindigkeit  
[ ]: Aufnahme-Betriebsart bei normaler Geschwindigkeit  
< >: Aufnahme-Betriebsart bei hoher Geschwindigkeit

## ⑧ REMARQUES CONCERNANT LE DIAGRAMME SCHÉMATIQUE

- Résistance:  
Pour différencier les unités de résistances, on utilise des symboles tels que K et M le symbole K signifie 1000 ohms, le symbole M signifie 1000 K ohms et la résistance donnée sans symbole est une résistance de type ohm.
- Condensateur:  
Pour indiquer l'unité de condensateur, on utilise le symbole P; ce symbole P signifie micro-microfarad, et l'unité de condensateur donnée sans ce symbole est le microfarad. En ce qui concerne le condensateur électrolytique, on utilise l'expression "tension de régime/capacité"  
(CH), (RH), (TH), (UJ): Compensation thermique
- Le diagramme schématique et le côté câblage de la PMI de ce modèle sont sujets à modifications sans préavis pour l'amélioration de ce produit.

- Les pièces portant la marque △ ( ) sont particulièrement importantes pour le maintien de la sécurité. S'assurer de les remplacer par des pièces du numéro de pièce spécifié pour maintenir la sécurité et la performance de l'appareil.
- La tension indiquée dans chaque section est celle mesurée par un multimètre numérique entre la section en question et le châssis, en l'absence de tout signal.  
Marque sauf pour ( ): Mode d'arrêt  
( ): Mode de lecture à vitesse normale  
[ ]: Mode d'enregistrement à vitesse normale  
< >: Mode d'enregistrement à grande vitesse

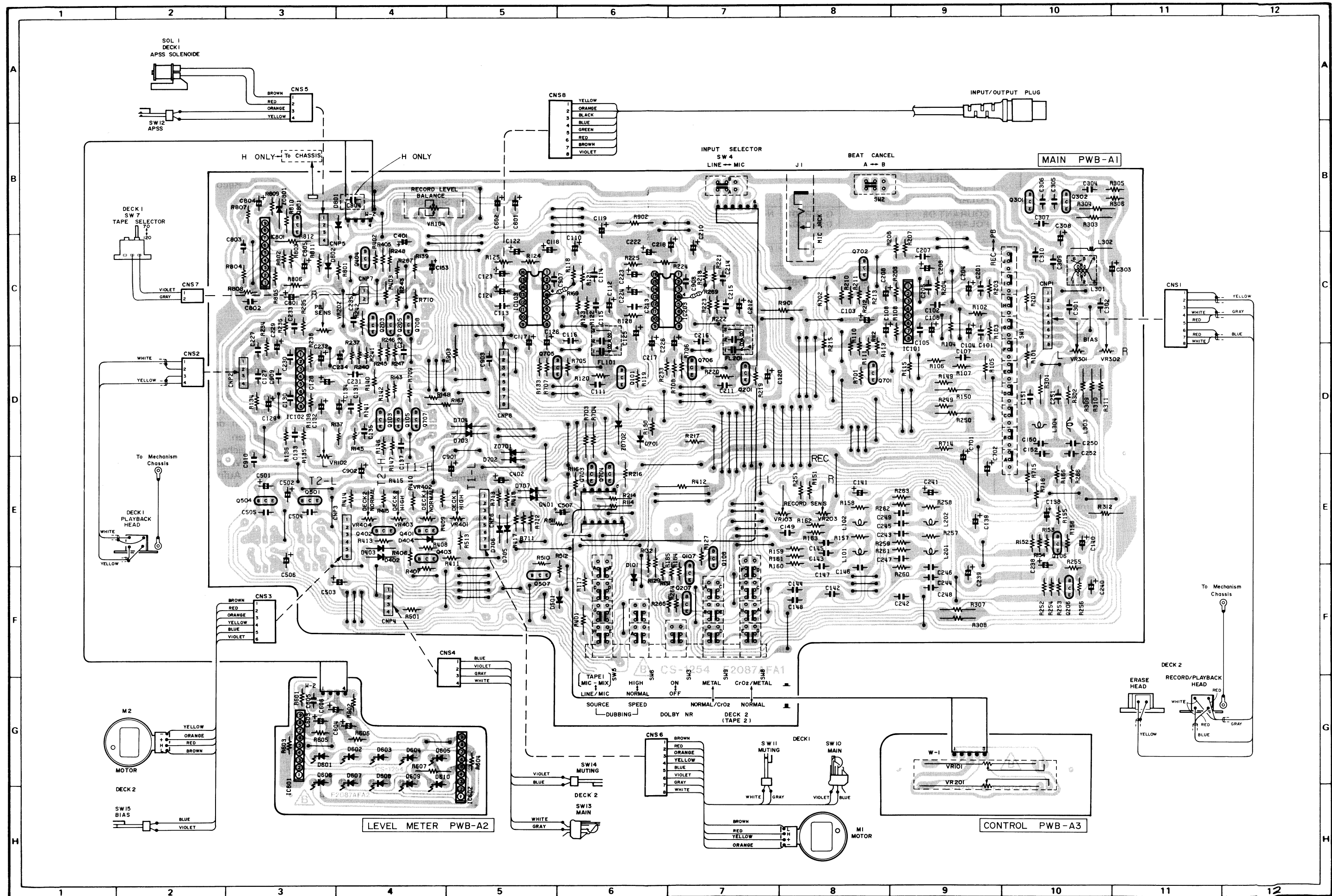


Figure 15 WIRING SIDE OF P.W. BOARD

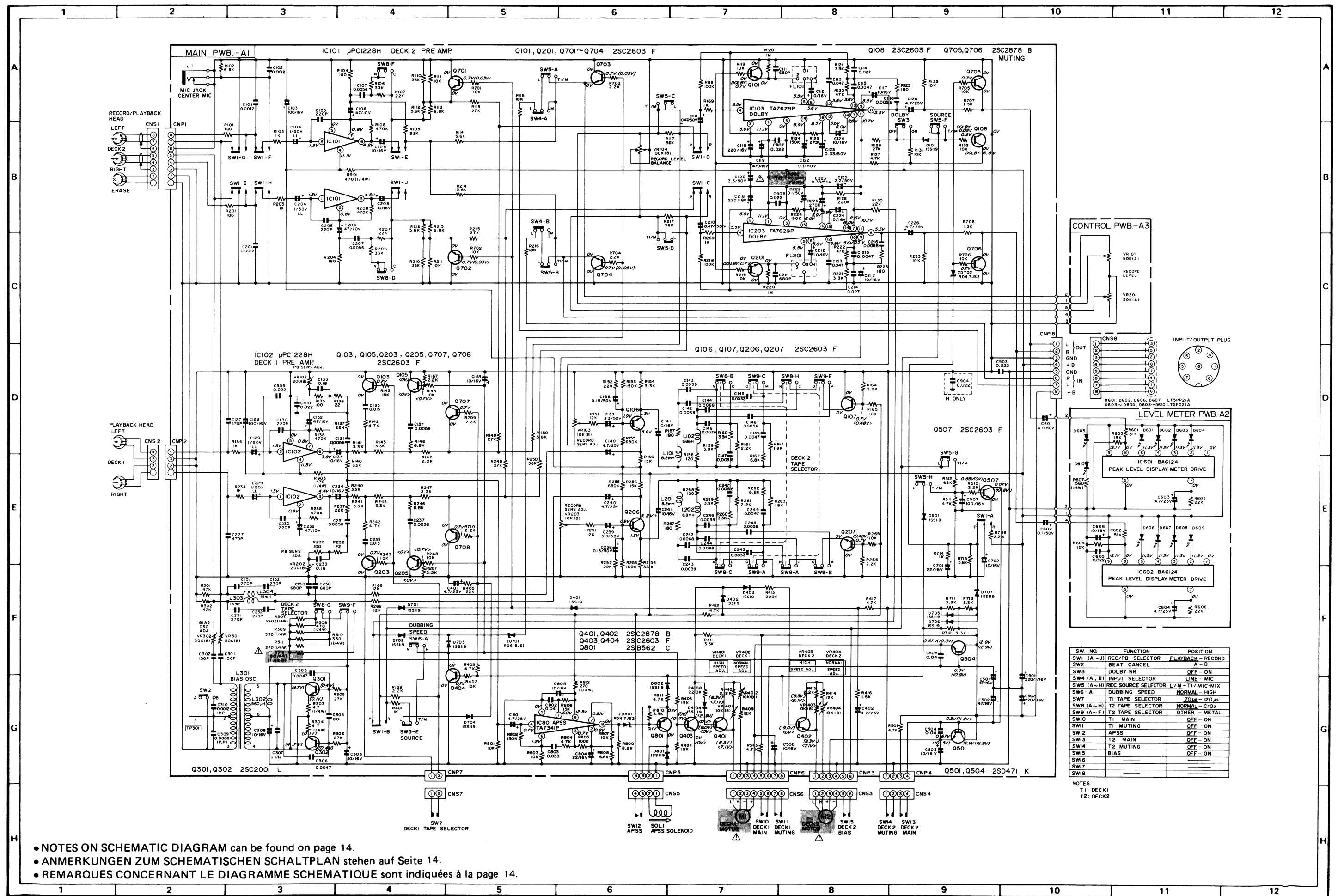
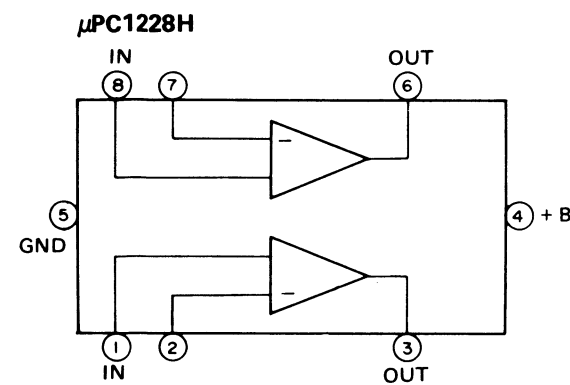
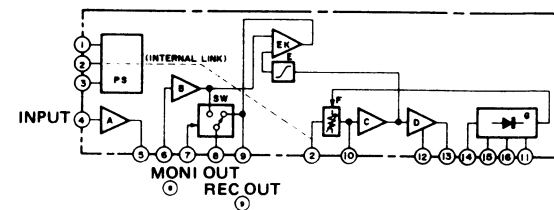


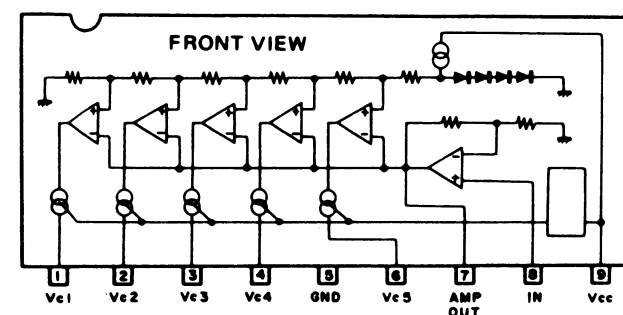
**Figure 17 SCHEMATIC DIAGRAM**



TA7629P



BA6124



TA7341P

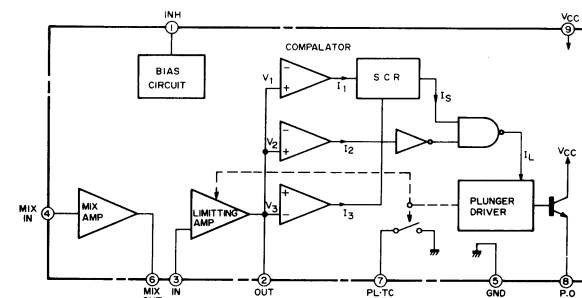
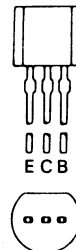


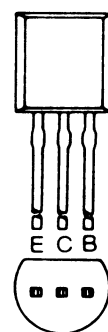
Figure 19-1 EQUIVALENT CIRCUIT (BLOCK DIAGRAM) OF IC

2SC2603F  
2SC2001L

2SC2878B



2SB562 C



2SD471 K

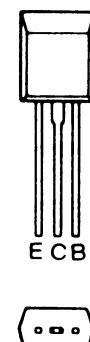
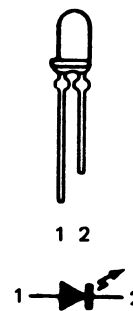
LT-5PR21A  
LT-5EG21A

Figure 19-2 TYPES OF TRANSISTOR AND LED

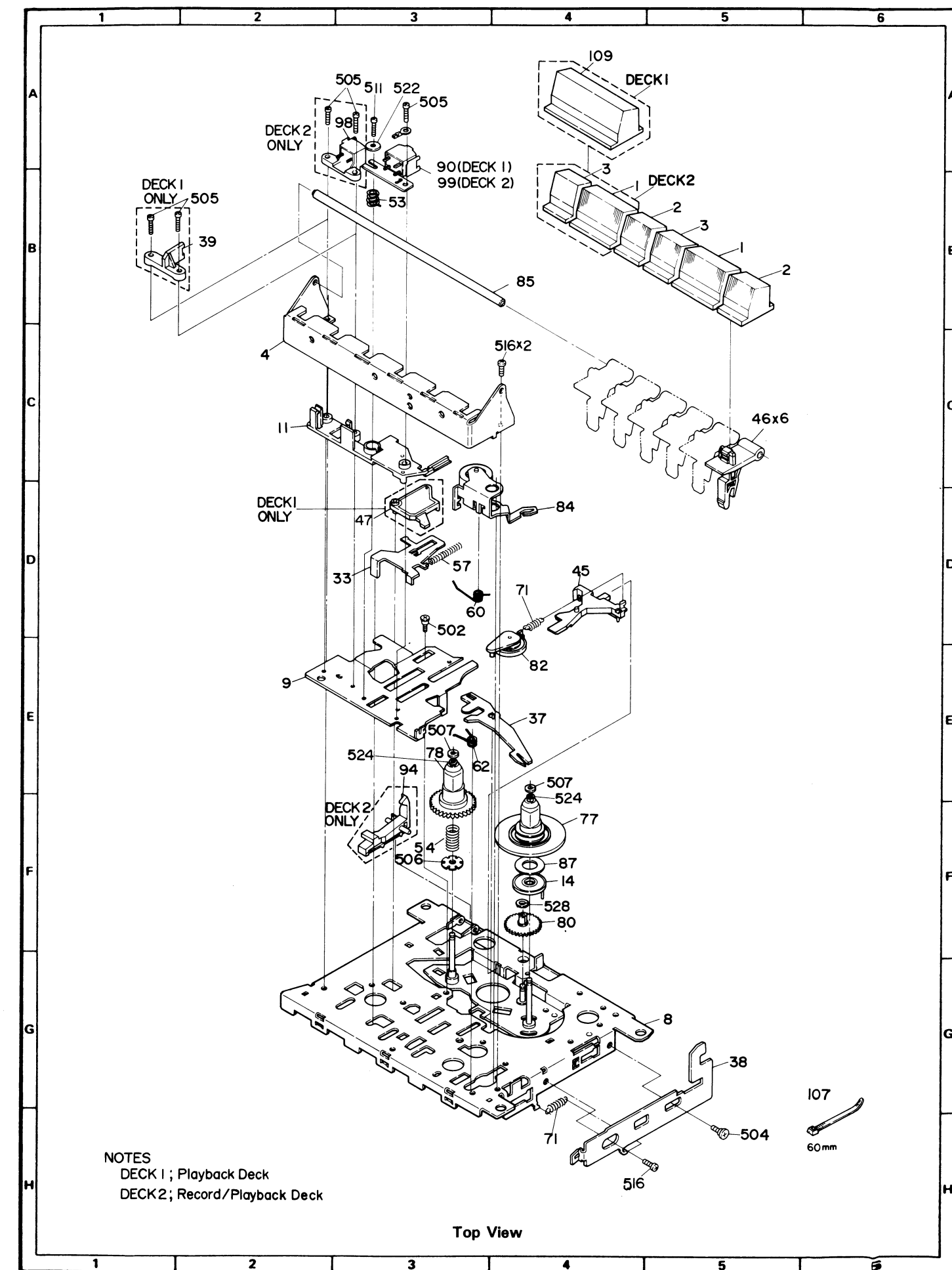


Figure 20 MECHANISM EXPLODED VIEW (1/2)

**Figure 21 MECHANISM EXPLODED VIEW (2/2)**

**Figure 22 CABINET EXPLODED VIEW**

**REPLACEMENT  
PARTS LIST****"HOW TO ORDER REPLACEMENT  
PARTS"**

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

**NOTE:**

Parts marked with "△" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

**ERSATZTEILLISTE****"BESTELLEN VON ERSATZTEILEN"**

Um Ihren Auftrag schnell und richtig ausführen zu können, bitten wir um die folgenden Angaben.

1. MODELLNUMMER
2. REF. NR.
3. TEIL NR.
4. BESCHREIBUNG

**ANMERKUNGEN:**

Die mit △ bezeichneten Teile sind besonders wichtig für die Aufrechterhaltung der Sicherheit. Beim Wechseln dieser Teile sollten die vorgeschriebenen Teile immer verwendet werden, um sowohl die Sicherheit als auch die Leistung des Gerätes aufrechtzuerhalten.

**LISTE DES PIÈCES  
DE RECHANGE****"COMMENT COMMANDER DES  
PIÈCES DE RECHANGE"**

Pour voir votre commande exécutée de manière rapide et correcte, veuillez fournir les renseignements suivants.

1. NUMÉRO DU MODÈLE
2. N° DE RÉFÉRENCE
3. N° DE LA PIÈCE
4. DESCRIPTION

**NOTE:**

Les pièces portant la marque △ sont particulièrement importantes pour le maintien de la sécurité. S'assurer de les remplacer par des pièces du numéro de pièce spécifié pour maintenir la sécurité et la performance de l'appareil.

| REF.NO.   | PART NO.      | DESCRIPTION     | CODE |
|-----------|---------------|-----------------|------|
| CONTROLS  |               |                 |      |
| VR101/201 | RVR-P0125AFZZ | 50 kohms(A) × 2 | AG   |
| VR102     | RVR-M0384AFZZ | 200 ohms(B)     | AB   |
| VR103     | RVR-M0391AFZZ | 10 kohm(B)      | AB   |
| VR104     | RVR-B0297AFZZ | 100 kohm(B)     | AD   |
| VR202     | RVR-M0384AFZZ | 200 ohms(B)     | AB   |
| VR203     | RVR-M0391AFZZ | 10 kohm(B)      | AB   |
| VR301     | RVR-M0394AFZZ | 50 kohms(B)     | AB   |
| VR302     | RVR-M0394AFZZ | 50 kohms(B)     | AB   |
| VR401     | RVR-M0391AFZZ | 10 kohm(B)      | AB   |
| VR402     | RVR-M0391AFZZ | 10 kohm(B)      | AB   |
| VR403     | RVR-M0391AFZZ | 10 kohm(B)      | AB   |
| VR404     | RVR-M0391AFZZ | 10 kohm(B)      | AB   |

**ELECTROLYTIC CAPACITORS**

(All electrolytic capacitors are ±20% type.)

|      |               |              |    |
|------|---------------|--------------|----|
| C103 | RC-GZA107AF1C | 100 μF, 16V  | AB |
| C104 | VCEALA1HW105M | 1 μF, 50V    | AB |
| C106 | RC-EZA476AF1A | 47 μF, 10V   | AB |
| C108 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C110 | RC-EZA474AF1H | 0.47 μF, 50V | AB |
| C112 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C117 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C118 | RC-GZA227AF1C | 220 μF, 16V  | AB |
| C119 | RC-GZV477AF1C | 470 μF, 16V  | AC |
| C120 | RC-EZA335AF1H | 3.3 μF, 50V  | AB |
| C122 | RC-EZA104AF1H | 0.1 μF, 50V  | AB |
| C123 | RC-EZA334AF1H | 0.33 μF, 50V | AB |
| C124 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C125 | RC-EZA225AF1H | 2.2 μF, 50V  | AB |
| C126 | RC-EZA475AF1E | 4.7 μF, 25V  | AB |
| C128 | RC-GZA107AF1C | 100 μF, 16V  | AB |
| C129 | VCEALA1HW105M | 1 μF, 50V    | AB |
| C132 | RC-EZA476AF1A | 47 μF, 10V   | AB |
| C134 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C138 | RC-EZA154AF1H | 0.15 μF, 50V | AB |
| C139 | RC-EZA335AF1H | 3.3 μF, 50V  | AB |
| C140 | RC-EZA475AF1E | 4.7 μF, 25V  | AB |
| C141 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C153 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C204 | VCEALA1HW105M | 1 μF, 50V    | AB |
| C206 | RC-EZA476AF1A | 47 μF, 10V   | AB |
| C208 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C210 | RC-EZA474AF1H | 0.47 μF, 50V | AB |
| C212 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C217 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C218 | RC-GZA227AF1C | 220 μF, 16V  | AB |
| C222 | RC-EZA104AF1H | 0.1 μF, 50V  | AB |
| C223 | RC-EZA334AF1H | 0.33 μF, 50V | AB |
| C224 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C226 | RC-EZA475AF1E | 4.7 μF, 25V  | AB |
| C229 | VCEALA1HW105M | 1 μF, 50V    | AB |
| C232 | RC-EZA476AF1A | 47 μF, 10V   | AB |
| C234 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C238 | RC-EZA154AF1H | 0.15 μF, 50V | AB |
| C239 | RC-EZA335AF1H | 3.3 μF, 50V  | AB |
| C240 | RC-EZA475AF1E | 4.7 μF, 25V  | AB |
| C241 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C303 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C308 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C401 | RC-EZA475AF1E | 4.7 μF, 25V  | AB |
| C402 | RC-EZA475AF1E | 4.7 μF, 25V  | AB |
| C501 | RC-GZV476AF1C | 47 μF, 16V   | AB |
| C502 | RC-GZV476AF1C | 47 μF, 16V   | AB |
| C503 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C506 | RC-EZA106AF1C | 10 μF, 16V   | AB |
| C507 | RC-GZA107AF1C | 100 μF, 16V  | AB |
| C601 | RC-EZA104AF1H | 0.1 μF, 50V  | AB |

| REF.NO. | PART NO.      | DESCRIPTION | CODE |
|---------|---------------|-------------|------|
| C602    | RC-EZA104AF1H | 0.1 μF, 50V | AB   |
| C603    | RC-EZA475AF1E | 4.7 μF, 25V | AB   |
| C604    | RC-EZA475AF1E | 4.7 μF, 25V | AB   |
| C606    | RC-EZA106AF1C | 10 μF, 16V  | AB   |
| C701    | RC-EZA226AF1C | 22 μF, 16V  | AG   |
| C702    | RC-EZA106AF1C | 10 μF, 16V  | AB   |
| C801    | RC-EZA475AF1E | 4.7 μF, 25V | AB   |
| C804    | RC-EZA226AF1C | 22 μF, 16V  | AG   |
| C805    | RC-EZA106AF1C | 10 μF, 16V  | AB   |
| C901    | RC-GZA227AF1C | 220 μF, 16V | AB   |
| C902    | RC-GZA227AF1C | 220 μF, 16V | AB   |

**CAPACITORS**

There are two types of capacitors available and they can be identified from each other by reading their Part Numbers.

**• Ceramic type capacitor;**

A symbol "C" or "K" is given at the 3rd digit of its Part Number like "VCC (or K).....J."

**• Semiconductor type capacitor;**

A symbol "T" is given at the 3rd digit of its Part Number like "VCT.....J."

The capacitance error of each capacitor is indicated by the symbol given at the 13th digit of the Part Number as follows: "J" (±5%), "K" (±10%), "M" (±20%), "N" (±30%), "C" (±0.25 pF), "D" (±0.5 pF), "Z" (±80—20%).

| REF.NO.             | PART NO.      | DESCRIPTION                | CODE | REF.NO. | PART NO.      | DESCRIPTION           | CODE |
|---------------------|---------------|----------------------------|------|---------|---------------|-----------------------|------|
| INTEGRATED CIRCUITS |               |                            |      |         |               |                       |      |
| IC101               | VHiUPC1228HA1 | Pre. Amp., μPC1228H        | AE   | D401    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| IC102               | VHiUPC1228HA1 | Pre. Amp., μPC1228H        | AE   | D402    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| IC103               | VHiTA7629P/-1 | Dolby NR Circuit, TA7629P  | AL   | D403    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| IC203               | VHiTA7629P/-1 | Dolby NR Circuit, TA7629P  | AL   | D501    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| IC601               | VHiBA6124/-1  | Level Meter Driver, BA6124 | AG   | D601    | VHPLT5PR21A-1 | LED, Red, LT5PR21A    | AB   |
| IC602               | VHiBA6124/-1  | Level Meter Driver, BA6124 | AG   | D602    | VHPLT5PR21A-1 | LED, Red, LT5PR21A    | AB   |
| IC801               | VHiTA7341P/-1 | APSS Circuit, TA7341P      | AG   | D603    | VHPLT5EG21A-1 | LED, Green, LT5EG21A  | AC   |
| TRANSISTORS         |               |                            |      | D604    | VHPLT5EG21A-1 | LED, Green, LT5EG21A  | AC   |
| Q101                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D605    | VHPLT5EG21A-1 | LED, Green, LT5EG21A  | AC   |
| Q103                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D606    | VHPLT5PR21A-1 | LED, Red, LT5PR21A    | AB   |
| Q105                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D607    | VHPLT5PR21A-1 | LED, Red, LT5PR21A    | AB   |
| Q106                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D608    | VHPLT5EG21A-1 | LED, Green, LT5EG21A  | AC   |
| Q107                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D609    | VHPLT5EG21A-1 | LED, Green, LT5EG21A  | AC   |
| Q108                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D610    | VHPLT5EG21A-1 | LED, Green, LT5EG21A  | AC   |
| Q201                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D701    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q203                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D702    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q205                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D703    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q206                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D704    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q207                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | D705    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q301                | VS2SC2001-L-1 | Silicon, NPN, 2SC2001 L    | AB   | D706    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q302                | VS2SC2001-L-1 | Silicon, NPN, 2SC2001 L    | AB   | D707    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q401                | VS2SC2878B/-1 | Silicon, NPN, 2SC2878 B    | AC   | D801    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q402                | VS2SC2878B/-1 | Silicon, NPN, 2SC2878 B    | AC   | D802    | VHD1SS119/-1  | Silicon, 1SS119       | AA   |
| Q403                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | ZD701   | VHERD6R8JS1-1 | Zener, 6.8V, RD6.8JS1 | AB   |
| Q404                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | ZD702   | VHERD4R7JS2-1 | Zener, 4.7V, RD4.7JS2 | AB   |
| Q501                | VS2SD471-K/-A | Silicon, NPN, 2SD471 K     | AD   | ZD801   | VHERD4R7JS2-1 | Zener, 4.7V, RD4.7JS2 | AB   |
| Q504                | VS2SD471-K/-A | Silicon, NPN, 2SD471 K     | AD   | FILTERS |               |                       |      |
| Q507                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | FL101   | RCiLL0091AFZZ | Multiplex             | AF   |
| Q701                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | FL201   | RCiLL0091AFZZ | Multiplex             | AF   |
| Q702                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | COILS   |               |                       |      |
| Q703                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | L101    | RCiLZ0159AFZZ | 8.2 mH                | AC   |
| Q704                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | L102    | RCiLZ0155AFZZ | 6.8 mH                | AC   |
| Q705                | VS2SC2878B/-1 | Silicon, NPN, 2SC2878 B    | AC   | L201    | RCiLZ0159AFZZ | 8.2 mH                | AC   |
| Q706                | VS2SC2878B/-1 | Silicon, NPN, 2SC2878 B    | AC   | L202    | RCiLZ0155AFZZ | 6.8 mH                | AC   |
| Q707                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | L301    | RCiLB0784AFZZ | Bias Oscillation      | AD   |
| Q708                | VS2SC2603-F-1 | Silicon, NPN, 2SC2603 F    | AB   | L302    | VP-CH561K0000 | 560 μH, Choke         | AB   |
| Q801                | VS2SB562-C/-1 | Silicon, PNP, 2SB562 C     | AD   | L303    | RCiLZ0120AFZZ | 15 mH, Bias Trap      | AC   |
| DIODES              |               |                            |      | L304    | RCiLZ0120AFZZ | 15 mH, Bias Trap      | AC   |
| D101                | VHD1SS119/-1  | Silicon, 1SS119            | AA   |         |               |                       |      |

| REF.NO. | PART NO.      | DESCRIPTION                            | CODE | REF.NO. | PART NO.      | DESCRIPTION     | CODE |
|---------|---------------|----------------------------------------|------|---------|---------------|-----------------|------|
| C245    | VCTYPA1EX332J | 0.0033 $\mu$ F, 25V                    | AB   | R140    | VRD-ST2CD333J | 33 kohms, 1/6W  | AA   |
| C246    | VCTYPA1EX392J | 0.0039 $\mu$ F, 25V                    | AA   | R141    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |
| C247    | VCTYPA1EX562J | 0.0056 $\mu$ F, 25V                    | AA   | R142    | VRD-ST2CD472J | 4.7 kohms, 1/6W | AA   |
| C248    | VCTYPA1EX562J | 0.0056 $\mu$ F, 25V                    | AA   | R143    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
| C249    | VCTYPA1EX472J | 0.0047 $\mu$ F, 25V                    | AA   | R145    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |
| C250    | VCCSPA1HL681J | 680 pF, 50V                            | AA   | R146    | VRD-ST2CD682J | 6.8 kohms, 1/6W | AA   |
| C251    | VCCSPA1HL271J | 270 pF, 50V                            | AA   | R147    | VRD-ST2CD222J | 2.2 kohms, 1/6W | AA   |
| C252    | VCCSPA1HL271J | 270 pF, 50V                            | AA   | R148    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
| C301    | VCCSPA1HL151J | 150 pF, 50V                            | AA   | R149    | VRD-ST2CD273J | 27 kohms, 1/6W  | AA   |
| C302    | VCCSPA1HL151J | 150 pF, 50V                            | AA   | R150    | VRD-ST2CD563J | 56 kohms, 1/6W  | AA   |
| C304    | VCTYPV1EX103J | 0.01 $\mu$ F, 25V                      | AA   | R151    | VRD-ST2CD123J | 12 kohms, 1/6W  | AA   |
| C305    | VCTYPA1EX472J | 0.0047 $\mu$ F, 25V                    | AA   | R152    | VRD-ST2CD223J | 22 kohms, 1/6W  | AA   |
| C306    | VCTYPA1EX472J | 0.0047 $\mu$ F, 25V                    | AA   | R153    | VRD-ST2CD154J | 150 kohms, 1/6W | AA   |
| C307    | VCTYPV1EX123J | 0.012 $\mu$ F, 25V                     | AA   | R154    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |
| C309    | VCQPKA2AA682J | 0.0068 $\mu$ F, 100V,<br>Polypropylene | AB   | R155    | VRD-ST2CD684J | 680 kohms, 1/6W | AA   |
| C310    | VCQPKA2AA122J | 0.0012 $\mu$ F, 100V,<br>Polypropylene | AB   | R156    | VRD-ST2CD153J | 15 kohms, 1/6W  | AA   |
| C504    | VCKZPA1HF403Z | 0.04 $\mu$ F, 50V                      | AA   | R157    | VRD-ST2CD181J | 180 ohms, 1/6W  | AA   |
| C505    | VCKZPA1HF403Z | 0.04 $\mu$ F, 50V                      | AA   | R158    | VRD-ST2CD121J | 120 ohms, 1/6W  | AA   |
| C605    | VCKZPA1HF223Z | 0.022 $\mu$ F, 50V                     | AA   | R159    | VRD-ST2CD392J | 3.9 kohms, 1/6W | AA   |
| C802    | VCKZPA1HF403Z | 0.04 $\mu$ F, 50V                      | AA   | R160    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |
| C803    | VCTYPA1EX333J | 0.033 $\mu$ F, 25V                     | AB   | R161    | VRD-ST2CD222J | 2.2 kohms, 1/6W | AA   |
| C903    | VCKZPA1HF223Z | 0.022 $\mu$ F, 50V                     | AA   | R162    | VRD-ST2CD682J | 6.8 kohms, 1/6W | AA   |
| C904    | VCKZPA1HF223Z | 0.022 $\mu$ F, 50V, H Only             | AA   | R163    | VRD-ST2CD182J | 1.8 kohms, 1/6W | AA   |
| C907    | VCKZPA1HF223Z | 0.022 $\mu$ F, 50V                     | AA   | R164    | VRD-ST2CD222J | 2.2 kohms, 1/6W | AA   |
| C908    | VCKZPA1HF223Z | 0.022 $\mu$ F, 50V                     | AA   | R165    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
| C909    | VCKZPA1HF223Z | 0.022 $\mu$ F, 50V                     | AA   | R166    | VRD-ST2CD123J | 12 kohms, 1/6W  | AA   |
| C910    | VCKZPA1HF223Z | 0.022 $\mu$ F, 50V                     | AA   | R167    | VRD-ST2CD222J | 2.2 kohms, 1/6W | AA   |
|         |               |                                        |      | R169    | VRD-ST2CD102J | 1 kohm, 1/6W    | AA   |
|         |               |                                        |      | R201    | VRD-ST2CD101J | 100 ohm, 1/6W   | AA   |
|         |               |                                        |      | R203    | VRD-ST2CD102J | 1 kohm, 1/6W    | AA   |
|         |               |                                        |      | R204    | VRD-ST2CD181J | 180 ohms, 1/6W  | AA   |
|         |               |                                        |      | R206    | VRD-ST2CD333J | 33 kohms, 1/6W  | AA   |
|         |               |                                        |      | R207    | VRD-ST2CD223J | 22 kohms, 1/6W  | AA   |
|         |               |                                        |      | R208    | VRD-ST2CD474J | 470 kohms, 1/6W | AA   |
|         |               |                                        |      | R210    | VRD-ST2CD333J | 33 kohms, 1/6W  | AA   |
|         |               |                                        |      | R211    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
|         |               |                                        |      | R212    | VRD-ST2CD562J | 5.6 kohms, 1/6W | AA   |
|         |               |                                        |      | R213    | VRD-ST2CD682J | 6.8 kohms, 1/6W | AA   |
|         |               |                                        |      | R214    | VRD-ST2CD562J | 5.6 kohms, 1/6W | AA   |
|         |               |                                        |      | R215    | VRD-ST2CD273J | 27 kohms, 1/6W  | AA   |
|         |               |                                        |      | R216    | VRD-ST2CD183J | 18 kohms, 1/6W  | AA   |
|         |               |                                        |      | R217    | VRD-ST2CD563J | 56 kohms, 1/6W  | AA   |
|         |               |                                        |      | R218    | VRD-ST2CD104J | 100 kohm, 1/6W  | AA   |
|         |               |                                        |      | R219    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
|         |               |                                        |      | R220    | VRD-ST2CD105J | 1 Mohm, 1/6W    | AA   |
|         |               |                                        |      | R221    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |
|         |               |                                        |      | R222    | VRD-ST2CD473J | 47 kohms, 1/6W  | AA   |
|         |               |                                        |      | R223    | VRD-ST2CD181J | 180 ohms, 1/6W  | AA   |
|         |               |                                        |      | R224    | VRD-ST2CD154J | 150 kohms, 1/6W | AA   |
|         |               |                                        |      | R225    | VRD-ST2CD274J | 270 kohms, 1/6W | AA   |
|         |               |                                        |      | R233    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
|         |               |                                        |      | R234    | VRD-ST2CD102J | 1 kohm, 1/6W    | AA   |
|         |               |                                        |      | R235    | VRD-ST2CD101J | 100 ohm, 1/6W   | AA   |
|         |               |                                        |      | R236    | VRD-ST2CD220J | 22 ohms, 1/6W   | AA   |
|         |               |                                        |      | R237    | VRD-ST2CD223J | 22 kohms, 1/6W  | AA   |
|         |               |                                        |      | R238    | VRD-ST2CD474J | 470 kohms, 1/6W | AA   |
|         |               |                                        |      | R240    | VRD-ST2CD333J | 33 kohms, 1/6W  | AA   |
|         |               |                                        |      | R241    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |
|         |               |                                        |      | R242    | VRD-ST2CD472J | 4.7 kohms, 1/6W | AA   |
|         |               |                                        |      | R243    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
|         |               |                                        |      | R245    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |
|         |               |                                        |      | R246    | VRD-ST2CD682J | 6.8 kohms, 1/6W | AA   |
|         |               |                                        |      | R247    | VRD-ST2CD222J | 2.2 kohms, 1/6W | AA   |
|         |               |                                        |      | R248    | VRD-ST2CD103J | 10 kohm, 1/6W   | AA   |
|         |               |                                        |      | R249    | VRD-ST2CD273J | 27 kohms, 1/6W  | AA   |
|         |               |                                        |      | R250    | VRD-ST2CD563J | 56 kohms, 1/6W  | AA   |
|         |               |                                        |      | R251    | VRD-ST2CD123J | 12 kohms, 1/6W  | AA   |
|         |               |                                        |      | R252    | VRD-ST2CD223J | 22 kohms, 1/6W  | AA   |
|         |               |                                        |      | R253    | VRD-ST2CD154J | 150 kohms, 1/6W | AA   |
|         |               |                                        |      | R254    | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA   |

## RESISTORS

(Unless otherwise specified, resistors are  $\pm 5\%$ , carbon type)

|      |               |                 |    |
|------|---------------|-----------------|----|
| R101 | VRD-ST2CD101J | 100 ohm, 1/6W   | AA |
| R102 | VRD-ST2CD682J | 6.8 kohms, 1/6W | AA |
| R103 | VRD-ST2CD102J | 1 kohm, 1/6W    | AA |
| R104 | VRD-ST2CD181J | 180 ohms, 1/6W  | AA |
| R105 | VRD-ST2CD333J | 33 kohms, 1/6W  | AA |
| R106 | VRD-ST2CD333J | 33 kohms, 1/6W  | AA |
| R107 | VRD-ST2CD223J | 22 kohms, 1/6W  | AA |
| R108 | VRD-ST2CD474J | 470 kohms, 1/6W | AA |
| R110 | VRD-ST2CD333J | 33 kohms, 1/6W  | AA |
| R111 | VRD-ST2CD103J | 10 kohm, 1/6W   | AA |
| R112 | VRD-ST2CD562J | 5.6 kohms, 1/6W | AA |
| R113 | VRD-ST2CD682J | 6.8 kohms, 1/6W | AA |
| R114 | VRD-ST2CD562J | 5.6 kohms, 1/6W | AA |
| R115 | VRD-ST2CD273J | 27 kohms, 1/6W  | AA |
| R116 | VRD-ST2CD183J | 18 kohms, 1/6W  | AA |
| R117 | VRD-ST2CD563J | 56 kohms, 1/6W  | AA |
| R118 | VRD-ST2CD104J | 100 kohm, 1/6W  | AA |
| R119 | VRD-ST2CD103J | 10 kohm, 1/6W   | AA |
| R120 | VRD-ST2CD105J | 1 Mohm, 1/6W    | AA |
| R121 | VRD-ST2CD332J | 3.3 kohms, 1/6W | AA |
| R122 | VRD-ST2CD473J | 47 kohms, 1/6W  | AA |
| R123 | VRD-ST2CD181J | 180 ohms, 1/6W  | AA |
| R124 | VRD-ST2CD154J | 150 kohms, 1/6W | AA |
| R125 | VRD-ST2CD274J | 270 kohms, 1/6W | AA |
| R127 | VRD-ST2CD472J | 4.7 kohms, 1/6W | AA |
| R128 | VRD-ST2CD224J | 220 kohms, 1/6W | AA |
| R129 | VRD-ST2CD273J | 27 kohms, 1/6W  | AA |
| R130 | VRD-ST2CD223J | 22 kohms, 1/6W  | AA |
| R131 | VRD-ST2CD103J | 10 kohm, 1/6W   | AA |
| R132 | VRD-ST2CD103J | 10 kohm, 1/6W   | AA |
| R133 | VRD-ST2CD103J | 10 kohm, 1/6W   | AA |
| R134 | VRD-ST2CD102J | 1 kohm, 1/6W    | AA |
| R135 | VRD-ST2CD101J | 100 ohm, 1/6W   | AA |
| R136 | VRD-ST2CD220J | 22 ohms, 1/6W   | AA |
| R137 | VRD-ST2CD223J | 22 kohms, 1/6W  | AA |
| R138 | VRD-ST2CD474J | 470 kohms, 1/6W | AA |
| R139 | VRD-ST2CD222J | 2.2 kohms, 1/6W | AA |

| REF.NO. | PART NO.      | DESCRIPTION                    | CODE | REF.NO.                 | PART NO.      | DESCRIPTION                                              | CODE |
|---------|---------------|--------------------------------|------|-------------------------|---------------|----------------------------------------------------------|------|
| R255    | VRD-ST2CD684J | 680 kohms, 1/6W                | AA   | R716                    | VRD-ST2CD222J | 2.2 kohms, 1/6W                                          | AA   |
| R256    | VRD-ST2CD153J | 15 kohms, 1/6W                 | AA   | R801                    | VRD-ST2CD103J | 10 kohm, 1/6W                                            | AA   |
| R257    | VRD-ST2CD181J | 180 ohms, 1/6W                 | AA   | R802                    | VRD-ST2CD154J | 150 kohms, 1/6W                                          | AA   |
| R258    | VRD-ST2CD121J | 120 ohms, 1/6W                 | AA   | R803                    | VRD-ST2CD103J | 10 kohm, 1/6W                                            | AA   |
| R259    | VRD-ST2CD392J | 3.9 kohms, 1/6W                | AA   | R804                    | VRD-ST2CD472J | 4.7 kohms, 1/6W                                          | AA   |
| R260    | VRD-ST2CD332J | 3.3 kohms, 1/6W                | AA   | R805                    | VRD-ST2CD104J | 100 kohm, 1/6W                                           | AA   |
| R261    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | R806                    | VRD-ST2CD153J | 15 kohms, 1/6W                                           | AA   |
| R262    | VRD-ST2CD682J | 6.8 kohms, 1/6W                | AA   | R807                    | VRD-ST2CD103J | 10 kohm, 1/6W                                            | AA   |
| R263    | VRD-ST2CD182J | 1.8 kohms, 1/6W                | AA   | R808                    | VRD-ST2CD682J | 6.8 kohms, 1/6W                                          | AA   |
| R264    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | R809                    | VRD-ST2CD822J | 8.2 kohms, 1/6W                                          | AA   |
| R265    | VRD-ST2CD103J | 10 kohm, 1/6W                  | AA   | R810                    | VRD-ST2CD332J | 3.3 kohms, 1/6W                                          | AA   |
| R266    | VRD-ST2CD123J | 12 kohms, 1/6W                 | AA   | R811                    | VRD-ST2CD472J | 4.7 kohms, 1/6W                                          | AA   |
| R267    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | R812                    | VRD-ST2EE271J | 270 ohms, 1/4W                                           | AA   |
| R269    | VRD-ST2CD102J | 1 kohm, 1/6W                   | AA   | R901                    | VRD-ST2EE471J | 470 ohms, 1/4W                                           | AA   |
| R301    | VRD-ST2CD473J | 47 kohms, 1/6W                 | AA   | △R902                   | VRG-ST2EC560J | 56 ohms, 1/4W, ±5%,<br>Fusible                           | AB   |
| R302    | VRD-ST2CD473J | 47 kohms, 1/6W                 | AA   | R903                    | VRD-ST2EE471J | 470 ohms, 1/4W                                           | AA   |
| R303    | VRD-ST2EE4R7J | 4.7 ohms, 1/4W                 | AA   | <b>CIRCUIT PARTS</b>    |               |                                                          |      |
| R304    | VRD-ST2EE4R7J | 4.7 ohms, 1/4W                 | AA   | CNS1                    | QCNW-3406AFZZ | Connector Assembly, 8Pin                                 | AH   |
| R305    | VRD-ST2CD273J | 27 kohms, 1/6W                 | AA   | CNS2                    | QCNW-3403AFZZ | Connector Assembly, 4Pin                                 | AF   |
| R306    | VRD-ST2CD273J | 27 kohms, 1/6W                 | AA   | CNS3                    | QCNW-3407AFZZ | Connector Assembly, 6Pin                                 | AE   |
| R307    | VRD-ST2EE391J | 390 ohms, 1/4W                 | AA   | CNS4                    | QCNW-3408AFZZ | Connector Assembly, 4Pin                                 | AD   |
| R308    | VRD-ST2EE471J | 470 ohms, 1/4W                 | AA   | CNS5                    | QCNW-3405AFZZ | Connector Assembly, 4Pin                                 | AD   |
| R309    | VRD-ST2EE331J | 330 ohms, 1/4W                 | AA   | CNS6                    | QCNW-3404AFZZ | Connector Assembly, 8Pin                                 | AE   |
| R310    | VRD-ST2EE331J | 330 ohms, 1/4W                 | AA   | CNS7                    | QCNW-3409AFZZ | Connector Assembly, 2Pin                                 | AB   |
| R311    | VRD-ST2EE271J | 270 ohms, 1/4W                 | AA   | CNS8                    | QCNW-3164AFZZ | Connector Assembly, 8Pin,<br>with Input/Output plug 8Pin | AP   |
| △R312   | VRG-ST2EC180J | 18 ohms, 1/4W, ±5%,<br>Fusible | AB   | CNP1                    | QCNCM432HAFZZ | Plug, 8Pin                                               | AB   |
| R401    | VRD-ST2CD102J | 1 kohm, 1/6W                   | AA   | CNP2                    | QCNCM585DAFZZ | Plug, 4Pin                                               | AB   |
| R402    | VRD-ST2CD103J | 10 kohm, 1/6W                  | AA   | CNP3                    | QCNCM439FAFZZ | Plug, 6Pin                                               | AB   |
| R403    | VRD-ST2CD472J | 4.7 kohms, 1/6W                | AA   | CNP4                    | QCNCM437DAFZZ | Plug, 4Pin                                               | AB   |
| R405    | VRD-ST2CD223J | 22 kohms, 1/6W                 | AA   | CNP5                    | QCNCM233DAFZZ | Plug, 4Pin                                               | AC   |
| R406    | VRD-ST2CD153J | 15 kohms, 1/6W                 | AA   | CNP6                    | QCNCM134HAFZZ | Plug, 8Pin                                               | AD   |
| R407    | VRD-ST2CD103J | 10 kohm, 1/6W                  | AA   | CNP7                    | QCNCM583BAFZZ | Plug, 2Pin                                               | AA   |
| R408    | VRD-ST2CD224J | 220 kohms, 1/6W                | AA   | CNP8                    | QCNCM589HAFZZ | Plug, 8Pin                                               | AB   |
| R409    | VRD-ST2CD123J | 12 kohms, 1/6W                 | AA   | J1                      | QJAKE0111AFZZ | Jack, Microphone                                         | AD   |
| R410    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | △M1                     | RMöTV0223AF01 | Motor, with Pulley                                       | AU   |
| R411    | VRD-ST2CD332J | 3.3 kohms, 1/6W                | AA   | △M2                     | RMöTV0223AF01 | Motor, with Pulley                                       | AU   |
| R412    | VRD-ST2CD472J | 4.7 kohms, 1/6W                | AA   | SOL1                    | RPLU-0175AFZZ | Solenoid, APSS                                           | AG   |
| R413    | VRD-ST2CD224J | 220 kohms, 1/6W                | AA   | SW1                     | QSW-S0483AFZZ | Switch, Slide Type                                       | AF   |
| R414    | VRD-ST2CD123J | 12 kohms, 1/6W                 | AA   | SW2                     | QSW-S0427AFZZ | Switch, Slide Type                                       | AD   |
| R415    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | SW3/5/6}                | QSW-P0627AFZZ | Switch, 5-Segment, Push<br>Type                          | AR   |
| R416    | VRD-ST2CD152J | 1.5 kohms, 1/6W                | AA   | SW4                     | QSW-S0427AFZZ | Switch, Slide Type                                       | AD   |
| R417    | VRD-ST2CD472J | 4.7 kohms, 1/6W                | AA   | SW7                     | QSW-P0630AFZZ | Switch, Push Type                                        | AF   |
| R501    | VRD-ST2CD472J | 4.7 kohms, 1/6W                | AA   | SW10                    | QSW-F0196AFZZ | Switch, Leaf Type                                        | AE   |
| R510    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | SW11                    | QSW-F0197AFZZ | Switch, Leaf Type                                        | AC   |
| R511    | VRD-ST2CD472J | 4.7 kohms, 1/6W                | AA   | SW12                    | QSW-F0197AFZZ | Switch, Leaf Type                                        | AC   |
| R512    | VRD-ST2CD683J | 68 kohms, 1/6W                 | AA   | SW13                    | QSW-F0196AFZZ | Switch, Leaf Type                                        | AE   |
| R513    | VRD-ST2CD472J | 4.7 kohms, 1/6W                | AA   | SW14                    | QSW-F0197AFZZ | Switch, Leaf Type                                        | AC   |
| R601    | VRD-ST2CD513J | 51 kohms, 1/6W                 | AA   | SW15                    | QSW-F0197AFZZ | Switch, Leaf Type                                        | AC   |
| R602    | VRD-ST2CD513J | 51 kohms, 1/6W                 | AA   | <b>MECHANICAL PARTS</b> |               |                                                          |      |
| R603    | VRD-ST2CD153J | 15 kohms, 1/6W                 | AA   | 1                       | JKNBR0253AFSA | Button, Play, Stop                                       | AD   |
| R604    | VRD-ST2CD153J | 15 kohms, 1/6W                 | AA   | 2                       | JKNBR0254AFSA | Button, Rewind Pause                                     | AD   |
| R605    | VRD-ST2CD223J | 22 kohms, 1/6W                 | AA   | 3                       | JKNBR0255AFSA | Button, Fast-Forward, Record                             | AD   |
| R606    | VRD-ST2CD223J | 22 kohms, 1/6W                 | AA   | 4                       | LANGF0863AFFW | Bracket, Button                                          | AD   |
| R607    | VRD-ST2EE561J | 560 ohms, 1/4W                 | AA   | 5                       | LANGF0961AFZZ | Bracket, Flwheel, Deck 1                                 | AA   |
| R701    | VRD-ST2CD103J | 10 kohm, 1/6W                  | AA   | 5                       | LANGF0962AFZZ | Bracket, Flwheel, Deck 2                                 | AB   |
| R702    | VRD-ST2CD103J | 10 kohm, 1/6W                  | AA   | 6                       | LANGQ0924AFFW | Bracket, Solenoid                                        | AB   |
| R703    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | 7                       | LBSHZ0086AFZZ | Motor Cushion                                            | AA   |
| R704    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | 8                       | LCHSM0565AFZZ | Main Chassis                                             | —    |
| R705    | VRD-ST2CD103J | 10 kohm, 1/6W                  | AA   | 9                       | LCHSS0212AFFW | Head Plate                                               | AD   |
| R706    | VRD-ST2CD103J | 10 kohm, 1/6W                  | AA   | 10                      | LCHSZ0163AFZZ | Full Auto Base                                           | AD   |
| R707    | VRD-ST2CD152J | 1.5 kohms, 1/6W                | AA   | 11                      | LDAIH0063AF00 | Head Base                                                | AB   |
| R708    | VRD-ST2CD152J | 1.5 kohms, 1/6W                | AA   | 12                      | MSPRT1074AFFJ | Spring, Record Sensor                                    | AA   |
| R709    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   | 13                      | LPLTM0148AFZZ | Plate, Lever Guide                                       | AE   |
| R710    | VRD-ST2CD222J | 2.2 kohms, 1/6W                | AA   |                         |               |                                                          |      |
| R711    | VRD-ST2CD332J | 3.3 kohms, 1/6W                | AA   |                         |               |                                                          |      |
| R712    | VRD-ST2CD332J | 3.3 kohms, 1/6W                | AA   |                         |               |                                                          |      |
| R713    | VRD-ST2CD332J | 3.3 kohms, 1/6W                | AA   |                         |               |                                                          |      |
| R714    | VRD-ST2CD102J | 1 kohm, 1/6W                   | AA   |                         |               |                                                          |      |
| R715    | VRD-ST2CD562J | 5.6 kohms, 1/6W                | AA   |                         |               |                                                          |      |

| REF.NO. | PART NO.      | DESCRIPTION                      | CODE |
|---------|---------------|----------------------------------|------|
| 14      | LPLTP0068AF00 | Clutch Plate, Auto Stop          | AB   |
| 15      | LRTNP0058AFZZ | Retaining Ring                   | AA   |
| 23      | MARMP0069AFZZ | Lever, PAD                       | AC   |
| 24      | MARMP0024AF00 | Lever, Swing                     | AB   |
| 25      | MCAMP0060AF00 | Cam, PAD                         | AB   |
| 26      | MCAMP0061AF00 | Cam, Full Auto                   | AB   |
| 27      | MLEVF1616AFFW | Lever, Play                      | AB   |
| 28      | MLEVF1617AFFW | Lever, Rewind                    | AB   |
| 29      | MLEVF1618AFFW | Lever, Fast-Forward              | AB   |
| 30      | MLEVF1619AFFW | Lever, Stop                      | AB   |
| 31      | MLEVF1620AFZZ | Lever, Pause                     | AB   |
| 32      | MLEVF1621AFFW | Lever, Eject Action              | AA   |
| 33      | MLEVF1622AFFW | Lever, Interlocking              | AB   |
| 34      | MLEVF1623AFFW | Lever, Lock, Deck 1              | AC   |
| 34      | MLEVF1631AFFW | Lever, Lock, Deck 2              | AC   |
| 35      | MLEVF1624AFFW | Lever, Switch                    | AC   |
| 36      | MLEVF1625AFFW | Lever, APSS Lock                 | AB   |
| 37      | MLEVF1626AFFW | Release Lever, Play Idler        | AB   |
| 38      | MLEVF1627AFFW | Lever, Eject                     | AC   |
| 39      | MLEVP0482AFZZ | Head, Dummy, Deck 1              | AB   |
| 40      | MLEVP0502AFZZ | Lever, Pause Lock                | AB   |
| 41      | MLEVP0518AFZZ | Lever, Fast-Forward/Rewind       | AK   |
| 42      | MLEVP0519AF00 | Lever, Full Auto Sensor          | AA   |
| 43      | MLEVP0520AF00 | Lever, Play Lock                 | AA   |
| 44      | MLEVP0521AF00 | Lever, Stop Lock                 | AA   |
| 45      | MLEVP0522AF00 | Lever, Brake                     | AB   |
| 46      | MLEVP0523AF00 | Lever, Button                    | AB   |
| 47      | MLEVP0524AF00 | Lever, APSS Switch               | AA   |
| 48      | MLEVP0525AF00 | Lever, Pause Coupler             | AB   |
| 49      | MLEVP0526AF00 | Lever, Full Auto Killer          | AB   |
| 50      | MLEVP0553AF00 | Lever, Stop Killer               | AC   |
| 51      | MSPRC0492AFFJ | Spring, Lever Return             | AA   |
| 52      | MSPRC0455AFFJ | Spring, Lever Return             | AA   |
| 53      | MSPRC0456AFFJ | Spring, Azimuth                  | AA   |
| 54      | MSPRC0457AFFJ | Spring, Back Tension             | AA   |
| 55      | MSPRC0458AFFJ | Spring, Pause Lock Lever         | AA   |
| 56      | MSPRC0459AFFJ | Spring, Flywheel                 | AA   |
| 57      | MSPRC0460AFFJ | Spring, Interlocking Lever       | AA   |
| 58      | MSPRC0461AFFJ | Spring, Solenoid                 | AA   |
| 59      | MSPRC0462AFFJ | Spring, Auto Stop Clutch         | AA   |
| 60      | MSPRD0570AFFJ | Spring, Pinch Roller             | AA   |
| 61      | MSPRD0571AFFJ | Spring, PAD Lever                | AA   |
| 62      | MSPRD0572AFFJ | Spring, Head Base Release        | AA   |
| 63      | MSPRD0573AFFJ | Spring, Cam Lock                 | AA   |
| 64      | MSPRD0574AFFJ | Spring, PAD Cam                  | AA   |
| 65      | MSPRD0575AFFJ | Spring, Swing Lever              | AA   |
| 66      | MSPRD0576AFFJ | Spring, Full Auto Killer Lever   | AA   |
| 67      | MSPRD0577AFFJ | Spring, Full Auto Killer         | AA   |
| 69      | MSPRP0370AFFW | Plate Spring, Cassette Press     | AA   |
| 70      | MSPRT1070AFFJ | Spring, Fast-Forward/Rewind Gear | AA   |
| 71      | MSPRT1071AFFJ | Spring, Playback Idler           | AA   |
| 72      | MSPRT1072AFFJ | Spring, Main Lock Plate          | AA   |
| 73      | MSPRT1073AFFJ | Spring, Switch Lever             | AA   |
| 74      | NBLTK0313AF00 | Belt, Motor (Large)              | AB   |
| 75      | NBLTK0314AF00 | Belt, Fast-Forward/Rewind        | AB   |
| 76      | NBLTK0291AF00 | Belt, Full Auto Gear             | AB   |
| 77      | NDAiR0185AFZZ | Take-Up Turntable                | AE   |
| 78      | NDAiR0186AF00 | Supply Turntable                 | AB   |
| 79      | NFLYC0120AFZZ | Flywheel                         | AG   |
| 80      | NGERH0149AF00 | Gear, Fast-Forward               | AB   |
| 81      | NGERH0144AF00 | Gear, Flywheel                   | AB   |
| 82      | NiDR-0088AFZZ | Idler, Playback                  | AE   |
| 83      | NPLYR0106AF00 | Pulley, Full Auto Gear           | AB   |
| 84      | NR6LY0065AFZZ | Pinch Roller Assembly            | AE   |
| 85      | NSFTT0304AFFD | Shaft, Button Lever              | AD   |
| 86      | NSFTT0305AFFD | Shaft, Solenoid                  | AB   |
| 87      | PCUSF0029AFZZ | Felt, Clutch                     | AA   |
| 88      | PGiDP0002AF00 | Lever Guide (Left)               | AC   |
| 89      | PGiDP0003AFZZ | Lever Guide (Right)              | AC   |

| REF.NO.       | PART NO.      | DESCRIPTION                                           | CODE |
|---------------|---------------|-------------------------------------------------------|------|
| 90            | RHEDF0090AFZZ | Head, Playback                                        | AM   |
| 91            | MLEVF1628AFFW | Lever, Record, Deck 2                                 | AB   |
| 91            | MLEVF1628AF01 | Lever, Record, Deck 1                                 | AB   |
| 92            | MLEVF1629AFFW | Lever, Record Sensor                                  | AC   |
| 93            | MLEVF1630AFFW | Lever, Record Switch                                  | AC   |
| 94            | MLEVP0527AF00 | Lever, Erase Prevention                               | AA   |
| 95            | MLEVF1799AFFW | Lever, Record Changeover                              | AD   |
| 96            | PSPAZ0107AFZZ | Spacer, Record/Playback Changeover, Outer             | AC   |
| 97            | PSPAZ0155AF00 | Spacer, Record/Playback Changeover, Inner             | AB   |
| 98            | RHEDA0125AFZZ | Head, Erase                                           | AH   |
| 99            | RHEDH0135AFZZ | Head, Record/Playback                                 | AM   |
| 100           | MSPRD0597AFFJ | Spring, Stop Killer Lever                             | AA   |
| 101           | LSLVM0178AFFD | Sleeve, Arm                                           | AC   |
| 102           | MSPRC0446AFFJ | Spring, Operation Lever                               | AA   |
| 103           | LANGT1405AFZZ | Bracket, Record/Playback Switch Lever                 | AC   |
| 104           | MLEVF1794AFFW | Lever, Record/Playback Switch                         | AC   |
| 105           | LHLDQ1055AF00 | Holder, Sensor Lever                                  | AB   |
| 106           | MLEVP0618AF00 | Sensor Lever, CrO <sub>2</sub> Tape                   | AB   |
| 107           | LHLDW1075AFZZ | Nylon Band, 60mm                                      | AA   |
| 108           | LHLDW3056AFZZ | Wire Holder                                           | AA   |
| 109           | JKNBRO256AFSA | Button, Play                                          | AD   |
| 501           | LX-BZ0451AFFD | Screw, $\phi 2 \times 6$ mm                           | AA   |
| 502           | LX-HZ0138AFFD | Screw, $\phi 2 \times 4.4$ mm                         | AB   |
| 503           | LX-HZ0139AFFD | Screw, $\phi 2.6 \times 9.8$ mm                       | AB   |
| 504           | LX-HZ0141AFFD | Screw, $\phi 2.6 \times 3.3$ mm                       | AB   |
| 505           | LX-HZ0142AFFD | Screw, $\phi 2 \times 9$ mm                           | AB   |
| 506           | LX-WZ1076AF00 | Washer, $\phi 2.6 \times \phi 8.5 \times 0.5$ mm      | AA   |
| 507           | LX-WZ9064AFZZ | Washer, $\phi 1.5 \times \phi 3.8 \times 0.5$ mm      | AA   |
| 508           | LX-HZ0137AFFD | Screw, $\phi 2.6 \times 21$ mm                        | AB   |
| 511           | LX-HZ0154AFFD | Screw, $\phi 2 \times 8$ mm                           | AB   |
| 512           | XHBSD16P05000 | Screw, $\phi 1.6 \times 5$ mm                         | AA   |
| 513           | LX-HZ0143AFFD | Screw, $\phi 2 \times 8$ mm                           | AB   |
| 514           | XHBSD26P05000 | Screw, $\phi 2.6 \times 5$ mm                         | AA   |
| 515           | XHBSD26P07000 | Screw, $\phi 2.6 \times 7$ mm                         | AA   |
| 516           | XHPSD26P04000 | Screw, $\phi 2.6 \times 4$ mm                         | AA   |
| 517           | XHPSD26P10000 | Screw, $\phi 2.6 \times 10$ mm                        | AA   |
| 518           | XHPSD26P26000 | Screw, $\phi 2.6 \times 26$ mm                        | AA   |
| 519           | XJBSD20P08000 | Screw, $\phi 2 \times 8$ mm                           | AA   |
| 520           | XWHJZ21-05040 | Washer, $\phi 2.1 \times \phi 4 \times 0.5$ mm        | AA   |
| 521           | XWHJZ21-05040 | Washer, $\phi 2.3 \times \phi 4.4 \times 0.5$ mm      | AA   |
| 522           | XWHSD21-05065 | Washer, $\phi 2.1 \times \phi 6.5 \times 0.5$ mm      | AA   |
| 523           | XREUJ15-04000 | Stop Ring, E-Type, $\phi 1.5 \times 0.4$ mm           | AA   |
| 524           | XWHJZ21-01340 | Washer, $\phi 2.1 \times \phi 4 \times 0.13$ mm       | AA   |
| 525           | XWHJZ47-02580 | Washer, $\phi 4.7 \times \phi 8 \times 0.25$ mm       | AA   |
| 526           | XREUJ20-04000 | Stop Ring, E-Type, $\phi 2 \times 0.4$ mm             | AA   |
| 527           | LX-WZ1098AFZZ | Stop Washer, $\phi 1.5 \times \phi 5 \times 0.5$ mm   | AA   |
| 528           | LX-WZ1086AFZZ | Stop Washer, $\phi 1.5 \times \phi 3.5 \times 0.5$ mm | AA   |
| 529           | XHBSD20P04000 | Screw, $\phi 2 \times 4$ mm                           | AA   |
| CABINET PARTS |               |                                                       |      |
| 201           | CPNLC1683AF01 | Front Panel Assembly, H(S)                            | AW   |
| 201           | CPNLC1683AF03 | Front Panel Assembly, H(BR)                           | AW   |
| 201           | CPNLC1695AF01 | Front Panel Assembly, H(BK)/E(BK)                     | AW   |

| REF.NO. | PART NO.      | DESCRIPTION                                               | CODE |
|---------|---------------|-----------------------------------------------------------|------|
| 201-1   | HDECPO349AFSA | Plate, Display, H(S/BR)                                   | AK   |
| 201-1   | HDECPO349AFSB | Plate, Display, H(BK)/E(BK)                               | AK   |
| 201-2   |               | Front Panel, H(S)                                         | —    |
| 201-2   |               | Front Panel, H(BR)                                        | —    |
| 201-2   |               | Front Panel, H(BK)/E(BK)                                  | —    |
| 202     | GCAB-3189AFSA | Cabinet, H(S)                                             | AQ   |
| 202     | GCAB-3189AFSB | Cabinet, H(BK)/E(BK)                                      | AQ   |
| 202     | GCAB-3189AFSC | Cabinet, H(BR)                                            | AQ   |
| 203     | GC6VA1606AFSB | Cover, Cassette Holder, Deck 1, H(S/BR)                   | AM   |
| 203     | GC6VA1606AFSA | Cover, Cassette Holder, Deck 1, H(BK)/E(BK)               | AM   |
| 204     | GC6VA1607AFSB | Cover, Cassette Holder, Deck 2, H(S/BR)                   | AM   |
| 204     | GC6VA1607AFSA | Cover, Cassette Holder, Deck 2, H(BK)/E(BK)               | AM   |
| 205     | HDECBO278AFSA | Holder, PWB                                               | AD   |
| 206     | JKNBM0437AFSH | Button, Push, H(S)                                        | AB   |
| 206     | JKNBM0437AFSE | Button, Push, H(BK)/E(BK)                                 | AB   |
| 206     | JKNBM0437AFSC | Button, Push, H(BR)                                       | AB   |
| 207     | JKNBN0483AFSB | Knob, Record Level Balance Control                        | AA   |
| 208     | JKNBP0220AFSE | Knob, Level Control                                       | AB   |
| 209     | KC6UB0182AF00 | Tape Counter                                              | AG   |
| 210     | LANGT1402AFZZ | Bracket, PWB                                              | AB   |
| 211     | LBSHC0059AFZZ | Bushing                                                   | AC   |
| 212     | LHLDX1065AFSA | Cassette Holder                                           | AF   |
| 214     | MLEVP0558AFSA | Lock Lever, Cassette Holder                               | AC   |
| 215     | MLEVP0604AFZZ | Lever, Push Switch                                        | AB   |
| 216     | MLiFP0040AFZZ | Damper, Cassette Holder                                   | AC   |
| 217     | MR6DM0098AFFW | Rod, Record/Playback                                      | AC   |
| 218     | MSPRD0664AFFJ | Spring, Cassette Holder, Left                             | AA   |
| 219     | MSPRD0665AFFJ | Spring, Cassette Holder, Right                            | AA   |
| 220     | MSPRP0393AFZZ | Spring, Ground, H Only                                    | AD   |
| 221     | NBLTK0337AFZZ | Belt, Tape Counter                                        | AB   |
| 222     | PFLT-0641AFZZ | Felt, Leg                                                 | AB   |
| 223     | TSPC-1420AFZZ | Label, Specifications, H(S), Indication: SA-201/205H(S)   | AC   |
| 223     | TSPC-1421AFZZ | Label, Specifications, H(S), Indication: SA-201/205Z(S)   | AC   |
| 223     | TSPC-1424AFZZ | Label, Specifications, H(BK), Indication: SA-201/205H(BK) | AC   |
| 223     | TSPC-1425AFZZ | Label, Specifications, H(BK), Indication: SA-201/205Z(BK) | AC   |
| 223     | TSPC-1423AFZZ | Label, Specifications, H(BR)                              | AC   |
| 223     | TSPC-1435AFZZ | Label, Specifications, E(BK)                              | AC   |
| 224     | LCHSM0557AFZZ | Main Chassis                                              | —    |
| 226     | LHLDW1075AFZZ | Nylon Band, 60mm                                          | AA   |
| 602     | LX-JZ0065AFFD | Screw, with Washer, $\phi 3 \times 9$ mm                  | AB   |
| 603     | LX-LZ0067AF00 | Push Rivet                                                | AA   |
| 605     | XHBSN30P08000 | Screw, $\phi 3 \times 8$ mm, H(S)                         | AA   |
| 605     | XHBSF30P08000 | Screw, $\phi 3 \times 8$ mm, H(BK)/E(BK)                  | AA   |
| 605     | XHBS530P10000 | Screw, $\phi 3 \times 10$ mm, H(BR)                       | AA   |
| 606     | XHBSN40P08000 | Screw, $\phi 4 \times 8$ mm, H(S)                         | AA   |
| 606     | XHBSF40P08000 | Screw, $\phi 4 \times 8$ mm, H(BK)/E(BK)                  | AA   |
| 606     | XHBS540P08000 | Screw, $\phi 3 \times 8$ mm, H(BR)                        | AA   |
| 607     | XHSSD30P08000 | Screw, $\phi 3 \times 8$ mm                               | AA   |
| 608     | XHSS330P08000 | Screw, $\phi 3 \times 8$ mm, Red                          | AA   |
| 609     | XJBSD30P10000 | Screw, $\phi 3 \times 10$ mm                              | AA   |
| 610     | XJBS330P10000 | Screw, $\phi 3 \times 10$ mm, Red                         | AA   |
| 611     | LX-HZ0087AFZZ | Screw, $\phi 3 \times 8$ mm                               | AA   |
| 612     | XHBSD30P06000 | Screw, $\phi 3 \times 6$ mm                               | AA   |

## ACCESSORIES/PACKING PARTS

|               |                                                  |    |
|---------------|--------------------------------------------------|----|
| SPAKA1414AFZZ | Packing Add., Left                               | AE |
| SPAKA1415AFZZ | Packing Add., Right                              | AE |
| SPAKC3535AFZZ | Packing Case, H(S), 3-Language                   | AH |
| SPAKC3536AFZZ | Packing Case, H(S), English                      | AH |
| SPAKC3542AFZZ | Packing Case, H(BK), 3-Language                  | AH |
| SPAKC3543AFZZ | Packing Case, H(BK), English                     | AH |
| SPAKC3541AFZZ | Packing Case, H(BR)                              | AH |
| SPAKC3579AFZZ | Packing Case, E(BK)                              | AH |
| SSAKA0024AFZZ | Polyethylene Bag, Accessory, H                   | AA |
| SSAKA0104AFZZ | Polyethylene Bag, Accessory, E                   | AH |
| SSAKH0192AFZZ | Polyethylene Bag, Unit, H(S/BR)                  | AA |
| SPAKP0593AFZZ | Polyethylene Bag, Unit, H(BK)/E(BK)              | AD |
| TiNSZ0828AFZZ | Operation Manual, 6-Language, H                  | AM |
| TiNSZ0829AFZZ | Operation Manual, 5-Language, H                  | AM |
| TiNSE1078AFZZ | Operation Manual, E                              | AF |
| TGANE1117AFZZ | Warranty Card, E Only                            | AB |
| TCAUH0350AFZZ | Caution Label, Dubbing, Unit, E Only             | AA |
| TCAUH0352AFZZ | Caution Label, Dubbing, For Packing Case, E Only | AA |
| TCAUZ0039AFZZ | Caution Label, Polyethylene Bag, E Only          | AA |
| TLABJ0006AFZZ | Label, MADE IN JAPAN, E Only                     | AA |
| TLABT0053AFZZ | Label, Staar                                     | AA |

## P.W.B. ASSEMBLY (Not Replacement Item)

|             |                                   |                                     |   |
|-------------|-----------------------------------|-------------------------------------|---|
| PWB-A1 ~ A3 | DUNTU0176AF03 (Combined Assembly) | Main/Level Meter/Control Circuit, H | — |
| PWB-A1 ~ A3 | DUNTU0176AF06 (Combined Assembly) | Main/Level Meter/Control Circuit, E | — |

## PACKING METHOD (RT-203E ONLY)

| SETTING POSITIONS OF SWITCHES AND KNOBS |        |
|-----------------------------------------|--------|
| Mechanism                               | OFF    |
| Tape Counter                            | "000"  |
| Dolby NR Switch                         | OFF    |
| Tape Selector Switch                    | NORMAL |
| Record Level Control                    | 0      |
| Record Level Balance Control            | CENTER |
| Input Selector Switch                   | LINE   |
| Beat Cancel Switch                      | A      |
| Dubbing Source Selector Switch          | OFF    |

1. Packing Add. (Left)
2. Packing Add. (Right)
3. Packing Case
4. Polyethylene Bag, Unit
5. Caution Label, Polyethylene Bag
6. Label, MADE IN JAPAN
7. Polyethylene Bag
8. Warranty Card
9. Operation Manual
10. Label
11. Caution Label, Dubbing, for Packing Case
12. Caution Label, Dubbing, for Unit

SPAKA1414AFZZ  
 SPAKA1415AFZZ  
 SPAKC3579AFZZ  
 SPAKP0593AFZZ  
 TCAUZ0039AFZZ  
 TLABJ0006AFZZ  
 SSAKA0104AFZZ  
 TGANE1117AFZZ  
 TiNSE1078AFZZ  
 TLABT0053AFZZ  
 TLABH0352AFZZ  
 TLABH0350AFZZ

